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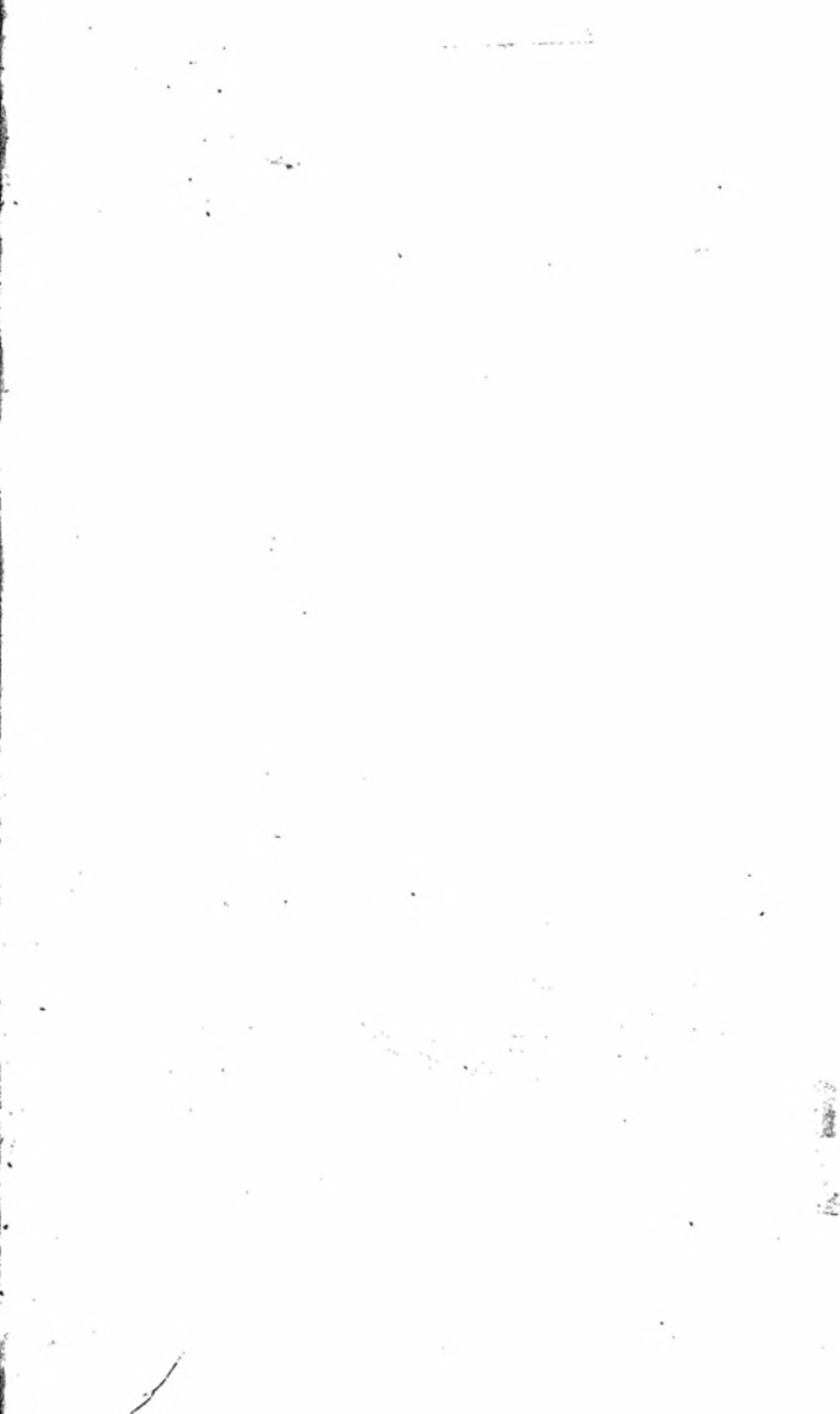
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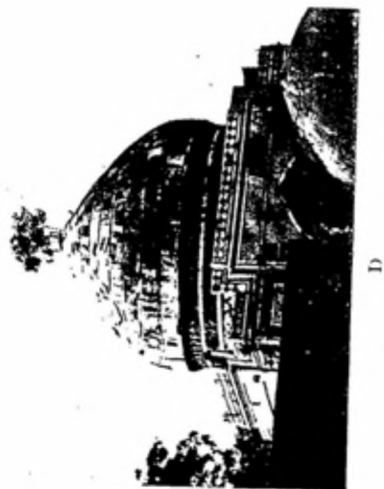
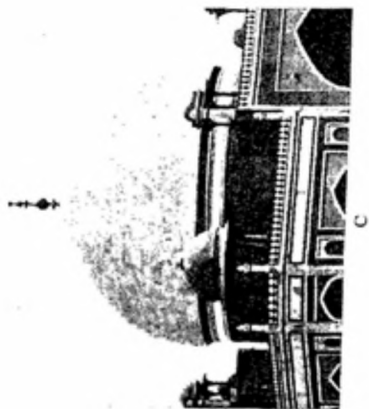
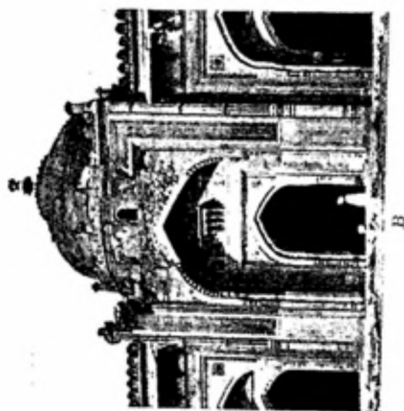
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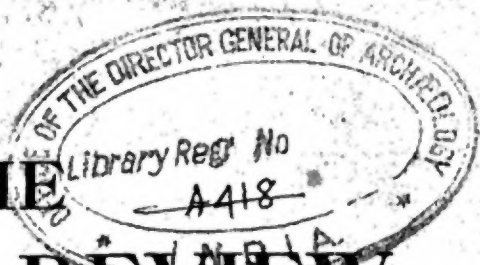
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THE ASIATIC REVIEW



OCTOBER 1, 1914

THE GREAT WAR, AND AFTER

FOR a century the British Empire has had the benefit of almost uninterrupted peace. At no period during that time has its existence been menaced, or have its unparalleled military and naval resources been seriously challenged. We have had all that time to build up this great Empire, to insure its commercial prosperity and its national security. We have been accused of carrying out that work in a haphazard and unsatisfactory manner. We have been told that we have blundered into this Empire, and that the best thing we could do was to blunder out of it again. It has been said that we have failed to centralize our vast dominions, to apply to them an adequate system of federalization or a unification of its commercial resources in one vast free trade combine. The German mind especially had regarded this loosely-knit monstrosity with contempt, and had banked on being able to destroy it with facility. These hypothetical calculations have been swept away at the first impact with reality. 25506

We have preferred to impose the will of a central authority on none of the Colonies, but to allow each to work out its own future, we have omitted to impose on them a differentiating tariff in favour of goods from the Motherland, we have made our power a menace to no other nation, we have sowed the seed of goodwill, we have reaped the harvest of gratitude. Even the Boers, who were engaged in a

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a few years later, to the astonishment of the world, with autonomy, have shown their sympathy and their loyalty. The enthusiasm of our Indian subjects is in the mouths of all. We give in another place further testimony of the whole-heartedness and comprehensiveness of that enthusiasm. It is our greatest gratification at the present crisis; it must bring the greatest gratitude when this crisis is over. We know that we are on the brink of a new era in Indian history, and one which the ASIATIC QUARTERLY REVIEW, to give the old name, has always foretold and unceasingly striven to bring nearer.

We print in this issue a poem written by Dr. John Pollen at a time when our relations with Russia were still unsatisfactory, in which, as our readers will see, he foretells that it is not the Great White Czar, but the Teuton who is our foe. The new alliance in arms of England and Russia spells better days, not only for India, but for the whole Continent of Asia. We know that at the conclusion of this war we shall have no menace to fear from the other side of the great Himalayas, that India, now secure, will be able to turn all her resources to internal reform, and that all the Eastern nations will be able to live in security and peace with their neighbours.

We also publish in this issue an article by Mr. Marmaduke Pickthall, who has laboured so indefatigably for the benefit of English influence in the Ottoman dominions. He points out that the German hold over Turkey is nothing more than a low intrigue, that it is a Germanized clique which, for the moment, though, as we are profoundly convinced, for the moment only, exert a pressure on Turkish Foreign Policy. The ASIATIC REVIEW has always been a true sympathizer with Turkey. In the past, the able pen of Professor Vambéry has contributed many articles on behalf of our Ottoman friend, and, turning to more recent times, we have upheld the Turkish cause in the dark hours of Lulu Burgas and Kirk Kilisse. When almost the entire English Press definitely took

sides against the Turks, we opened our columns to their grievances, and our hearts to their troubles. We felt that ever since Italy took Tripoli, Turkey had been maltreated, libelled and misrepresented. Well might the Turkish nation after these unparalleled disasters which menaced her very existence have asked herself whether the influence of a Bieberstein had not been a curse, and ineffective German guns a delusion. The advice of the Allies to Turkey at the present juncture not to adopt a policy of adventure was absolutely disinterested, and we feel sure that the will of the Turks themselves is opposed to any such course. We believe that the Turk is at heart an honest, manly and peaceable gentleman. We are convinced that in embarking on war now they would be committing the greatest crime against their own nation. We hold out to them the hope that by a policy of moderation now they will be able to share in the era of peace and prosperity which will follow this war.

The active co-operation of the forces of the Mikado in this war is another proof that East and West can combine in removing forces which are calculated to substitute repression for liberty. The action of Japan insures the peaceful development of the Eastern coasts of Asia by the removal of the one stumbling-block which threatened the realization of that idea. In future Russia, Japan and China will combine to regulate the commerce in that quarter.

The causes and the occasion for this war are known to us all. We must see to it that its ultimate results are a triumph for liberty. We have entered into this war to break up a military caste. Then let us see to it that in future there will no longer be the domination of that militarism, or any outrage against the principle of nationality. Many crimes have been committed in its name in the past, but the Governments of the nations of the world must now realize that any transgression of the true application of that principle can have no permanency. But the Prussians are a direct menace to that principle. They have had their place

in the sun, but they have turned it into a twilight. They have been asked for bread by their victims, but they have invariably given a stone. Every means of civil life has been turned by them to military ends. They have prepared for "the day of reckoning" with Britain. They wanted it later; it has come sooner. They want to Prussianize the world; their policy is the very contradiction of liberty and the antithesis of human happiness; but their greatest crime is against their own nation and their fellow Germans, whom they are sending to their death, and sacrificing like pawns on a chessboard. This spirit must be broken, and we look for the co-operation of the Germans themselves in order to achieve that object. We applaud the triumphs of German scientific research and their literary achievements; we deplore that the great talent of this great nation has, in time of peace, been turned to the preparation for war, and in time of war squandered and sacrificed on the altar of Prussian militarism. We profoundly hope that the Germans will free themselves from this virus, and in future be able to co-operate with the rest of the world in working to make it a better place to live in. But we cannot stop until that result has been achieved, for without it we should only be entering, after an artificial peace, into a prolonged era of armaments which would make all hopes of social reform vain, and would cut at the very root of civilization. The East has realized that as clearly as the West. Let the German people realize it also. "Ex oriente lux, ex occidente lex," so runs the motto of the ASIATIC REVIEW. East and West have joined hands to secure the deliverance of the world.

THE WAR AND THE MIGHTY VOICE OF INDIA

BY SIR ROPER LETHBRIDGE, K.C.I.E.

AT no period or crisis in history has India ever spoken with so unanimous or so mighty a voice as that in which she has expressed her passionate loyalty to the King Emperor at this crisis, her warm approval of the noble motives that have driven the British Empire into this terrible war of nations, and her enthusiastic desire that her gallant sons should stand shoulder to shoulder with the other members of the Imperial Family in the defence of liberty and right, and for the curbing, and ultimately the crushing, of the arrogant military despotism that Prussian soldiers would impose on the world. That India should thus spontaneously assert her right to take an honoured place among the sister-States of the Empire, and voluntarily demand to share the responsibilities as well as the privileges of that place—moved thereto by her own self-respect and by her consciousness of her own interests and dignity, no less than by her loyalty and her sense of justice—is an event of the highest political significance. I trust and believe that it marks the beginning of a new era in our Imperial relations—the era of mutual confidence and support, that was foreseen and longed for by Beaconsfield and Lytton, that was heralded by Lord Morley and Lord Minto, and that has, I hope, been inaugurated by Lord

Crewe and Lord Hardinge in frankly accepting the proffered military aid of the Indian Princes and peoples.

The absolute spontaneity of the Indian uprising—showing, as the eminent editor of the *Wednesday Review* well puts it in his issue of August 19, that “perhaps for the first time since the British connection the people and the Princes of India are realizing that larger loyalty which they owe as citizens of the Empire”—was clearly indicated in the telegrams that first told us of the local patriotic meetings being held in every district of India. But since then we have received the files of the purely Indian Press, and they tell the same story for every corner of every province. I have quoted the *Wednesday Review* of Trichinopoly in the Madras Presidency; and the *Hindu* of Madras City, perhaps the most influential of the purely Indian papers, says much the same thing. In Bengal, Mr. Surendra Nath Banerjea’s *Bengalee* says:

“In the presence of a common enemy, be it Germany or any other Power, we sink our differences, we forget our little quarrels, and close our ranks, and offer all that we possess in defence of the great Empire to which we are all so proud to belong, and with which the future prosperity and advancement of our people are bound up.”

In Bombay, the *Jam-e-Jamshid* says:

“This is the time when India should feel it to be her duty to show to the world, to England’s foes and allies alike, how greatly she is attached to her, how stanch and resolute is her devotion to her interests, how ready and willing she is to make any sacrifice she can in men and treasure for the defence of her possessions and the assertion of her honour and dignity.”

In the United Provinces the *Advocate* of Lucknow says:

“Now that England is at war with a foreign enemy, she may absolutely depend upon the loyalty of the

people of this country. . . . They are fully prepared at this crisis to place their resources at the disposal of the authorities in defence of their country."

In Behar and Orissa, the *Beharee* of Bankipore says :

"We are sure we echo the sentiment common to the people of the country when we say we are deeply beholden to His Excellency Lord Hardinge for the timely cable to His Majesty that the loyalty of every man in India might be thoroughly relied on in the event of war. India's fortunes are indissolubly linked up with those of England."

In the Punjab, the *Tribune* of Lahore says that, to the question, "What is the attitude of Indians in the face of this unparalleled crisis?" there is but one answer, "and that answer is given by all without a moment's hesitation : it is one of passive and trustful loyalty to the person and throne of the Sovereign."

And in Eastern Bengal, now reunited to Bengal Proper, the *Herald* of Dacca says :

"If the loyal meetings which are being held all over the country do nothing else, they will at least give the enemy to understand that Britain does not stand alone in the fight . . . that the vast people of an Empire on which the sun never sets stand behind her like one man, ready to place at her disposal the last gun, the last man and the last penny they possess."

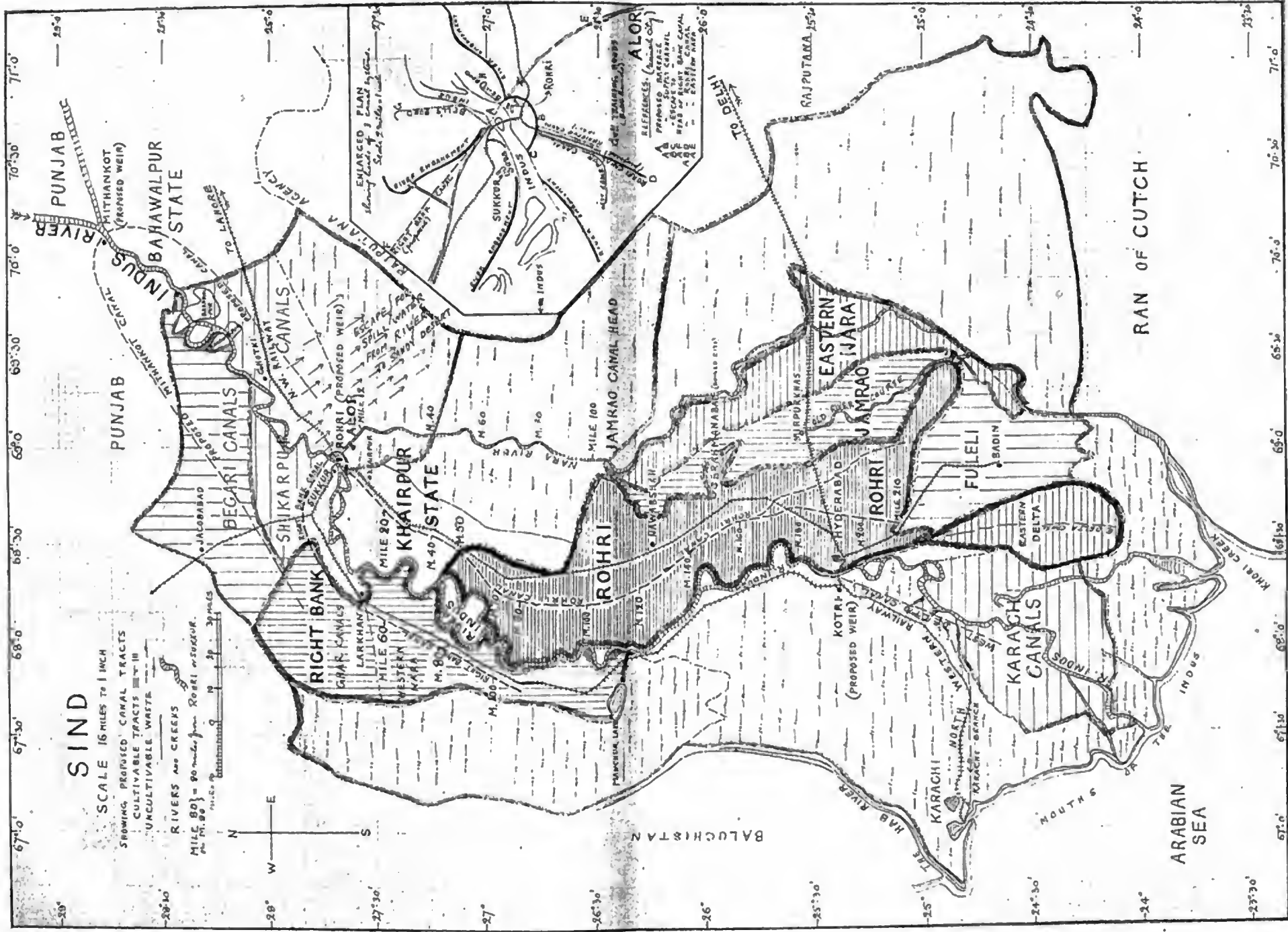
Nearly all the papers I have here quoted are known as advanced organs—indeed, they are quoted by the official organ of the National Indian Congress. And so, coming as they do from every province of India, they prove beyond question that this great tidal wave of loyal affection towards the Empire is at once spontaneous and unanimous throughout the country—and that it is shared in, not only by the Princes and nobles and aristocracy, not only by all the great fighting races of Upper and Central India

and the Frontier, but also by all the educated classes every where.

Hardly less notable are the eager and enthusiastic offers, from practically the whole of the 700 ruling Chiefs and Princes of India, tendering to His Majesty the King Emperor their swords, their troops, their resources and, if necessary, their lives. We have heard much of the troops of the Kings of Bavaria and Saxony who are marching under the Kaiser—but the Maharaja of Jodhpur, the young Rajput Prince who is coming with his uncle, that Bayard of Indian chivalry the Maharaja Sir Pertab Singh, to lead his troops against the Germans, is the ruler of a territory bigger than Bavaria and Saxony put together!—and his ancestors were Emperors of Kanauj, ruling a territory bigger than the German Empire, centuries before the Hohenzollerns were heard of as petty Counts of the Holy Roman Empire! The Maharaja of Jodhpur, according to Hindu reckoning, yields precedence to the Maharana of Udaipur, as also does the Maharaja of Jaipur—but that is mainly because Jodhpur and Jaipur condescended to allow their Princesses to become the consorts of the Mughal Emperors Akbar and Jehangir, while Udaipur indignantly refused any such marriages!

What could be more thrilling than the soldierly message of the Maharaja of Rewa to the Viceroy: "What orders from His Majesty for me and my troops?" And this Maharaja, the Chief of the Baghel Rajputs and representative of the ancient "Sons of Fire" (*Agnikula*), whose ancestors have reigned in Baghelkhand since before the time of the Norman Conquest, is the ruler of a territory just equal to the German kingdoms of Saxony and Würtemberg combined.

The young Nizam of Hyderabad, the premier Prince of the Indian Empire, who has offered all his resources, is a lineal descendant of the first Caliph, the successor of the Prophet, and he rules a territory three times as big as Bavaria and more than twice as populous. And another





great Muhammadan Prince, the heir-apparent of Her Highness the Begum of Bhopal, who is coming now to the war at the head of the Bhopal contingent, is a descendant of the famous Dost Muhammad Khan, the Afghan commander of one of Aurangzeb's armies.

The magnificent contribution to the Imperial war chest given by the Maharaja of Mysore—no less than fifty lakhs, or one-third of a million sterling—was loudly cheered by His Highness's many friends in the House of Lords. The Maharaja is one of the most loyal and powerful rulers in India, and one who has given his subjects a considerable instalment of representative government; he rules a territory larger than the combined area of the German kingdoms of Würtemberg and Saxony and the Grand Duchy of Baden, and a population larger than that of Bavaria and Hesse put together.

In enumerating some of the great Princes who are coming to the war in person, in company with the Maharaja Sir Pertab Singh and the Maharaja of Jodhpur, the *Times* aptly speaks of "the knightly figure of the Maharaja of Bikanir, and the young Maharaja of Patiala, the head of the Sikhs." The Maharaja of Bikanir is a Rahtor Rajput, the head of a junior branch of the illustrious dynasty of Jodhpur; his territory is larger than the combined area of Saxony, Würtemberg, and Baden, and his famous Camel Corps has seen service in many a field, and is the admiration of the world.

It is impossible for me in this place to enumerate all the gallant chiefs who are arming for the fray. And those Anglo-Indians like myself who have seen much of the chivalry and martial ardour of the Indian troops—especially the Rajputs, the Gurkhas (of whom no fewer than seven battalions are coming), the Sikhs, and the Pathans—are grateful to Lord Curzon for the admirable description he gave of their splendid military qualities in his speech at Hull on September 7. We would like, as Lord Curzon said, to see the Indian Cavalry charge the German Uhlans.

We would like to see the sturdy little Gurkhas, with their dangerous *bukris*, giving the modern Huns a taste of cold steel. And, unlike the Huns, they all have a spirit of the highest chivalry; as Lord Curzon says, "They would not fire on the Red Cross badge; they would not murder innocent women and children; they would not bombard Christian cathedrals even if to them they were the fanes of an alien faith. The East is sending out a civilized soldiery to save Europe from the modern Huns."

And as they will be chivalrous to the weak and the conquered, so will they be terrible to the relentless enemy. It will be theirs—*Parcere subjectis, et debellare superbos*. The spirit in which they will meet the Germans may be well illustrated by a capital story of that grand soldier the Maharaja Sir Pertab Singh, told by Sir Valentine Chirol in the course of a letter to the *Times*. Sir Valentine writes :

"One minor point is also worth remembering when our Indian troops come into contact with the Germans. They have never forgotten the insolence of the German contingent in China in 1900, whose favourite amusement was to jeer at them as 'coolies.' Even so gallant a gentleman as old Sir Pertab Singh was spared no indignity that could be safely inflicted upon him by the German headquarters under Field-Marshal von Waldersee. I happened to be in camp with him at Bikanir a couple of years ago, when the former German Ambassador in London, Count Wolff Metternich, arrived as a somewhat unwelcome guest, and I remember how the inborn courtesy of the great Rajput Prince was strained to the uttermost to repress the bitter memories of those days in Peking. As he put it in his quaint English, 'I like meet German on horseback, sword in hand, not *salaam* in drawing-room. Show him then Rajput no coolie.'"

Knowing what a charge of Rajput cavalry is like, I pity the unfortunate German Uhlans who get in their way.

When we come to the more official classes of India—the rural aristocracy, and the higher professional classes who represent the people in the Legislative Councils—their unanimity and enthusiasm is not less remarkable than that of the Princes and ruling chiefs. The meeting of the Imperial Legislative Council at Simla on September 8 was an event of first-class historic importance, if only for the reading by the Viceroy of His Majesty the King's message to "the Princes and Peoples of my Indian Empire," and the marvellous reception of its words of thrilling eloquence by the Indian representatives. Our dear King's words always come from the heart, and their ring is always that of sincerity and truth, and perhaps never more obviously so than in this inspiring message. Not only on the great occasion of the Coronation, but also throughout the repeated visits to India of their Majesties—whether as Prince and Princess of Wales, or as King Emperor and Queen Empress—the warmth of their affection for their Indian subjects, and the enthusiastic love and loyalty with which it is reciprocated throughout India, have always been manifest. When Lord Hardinge's account of this striking scene in the Council Chamber was read in the House of Commons by the Under-Secretary of State, Mr. Bonar Law immediately rose to ask, on behalf of the Opposition, that the wonderful narrative should be at once circulated throughout the Empire, and indeed throughout the civilized world. As Mr. Bhupendra Nath Basu well observes in a letter to the *Times* of September 12 :

"As an Indian who came over to this country only temporarily as a delegate of the Indian National Congress, I read this morning the message of our beloved Viceroy of India's loyalty and India's co-operation in this great crisis of our life with tears in my eyes. Our Indian sun stirs our blood to strong emotions. We feel grateful to Mr. Bonar Law for his suggestion that this message should be published to the world, and may I add that Indian women have not only cheer-

fully parted with their sons, husbands, and brothers at the call of the King, but I have received communications from India that many of them who are too humble to make their offer to the Viceroy are willing, if need be, to part with their personal jewellery and ornaments, things which in India constitute the women's insurance fund, as they did in bygone times when religion or honour was in danger."

The Viceroy, after reading the King's gracious message, addressed the Imperial Council in a stirring speech, in the course of which he declared that :

"Countless meetings, and the warm response to the appeal for relief funds, filled him with satisfaction, and confirmed the impression that the Government would be supported by the determination, the courage, and the endurance of the whole country. It was with confidence and pride that he was able to offer to His Majesty the finest and largest force of British and Indian troops for service in Europe that had ever left the shores of India."

And thereon, Sir Gangadhar Chitnavis, as the leader of the Indian members of the Council, moved in eloquent terms a Resolution "voicing the feeling that animates the whole of the people of India," that expressed "their feelings of unswerving loyalty and enthusiastic devotion to their King Emperor, and an assurance of their unflinching support to the British Government." The resolution was seconded by the Raja Sir Muhammad Ali Khan of Mahmudabad, supported by every one of the non-official members, including such great notables as the Sardar Daljit Singh of the Punjab, the Pandit Madan Mohan Malaviya of the United Provinces, Sir Fazulbhoy Currimbhoy of Bombay, Mr. Ghaznavi, the representative of the Muhammadans of Eastern Bengal, and Mr. Surendra Nath Banerjea of Bengal Proper, and carried unanimously with the greatest enthusiasm.

I have already mentioned the fact that this great policy of trust in the Princes and peoples of India, and of reliance on them to take their proper position in the military defence of the Empire, was initiated by Lord Beaconsfield and Lord Lytton—and of this I have some personal knowledge which I should like to place on public record.

In the spring of 1878, when the Treaty of San Stefano was concluded between Russia and Turkey, Lord Beaconsfield demanded that the terms of that Treaty should be revised by a Conference of the Great Powers. When that demand was not complied with, he at once, on April 8, called out our Reserve Forces, and sent the British Fleet to the Dardanelles. Even these measures did not produce the desired effect. Thereon Lord Beaconsfield, with the hearty concurrence of the Viceroy, brought a powerful division of Indian troops to Malta—the diplomatic situation was cleared as if by magic, and early in June, Lord Beaconsfield and Lord Salisbury went out as the British plenipotentiaries to the Congress of Berlin—and on July 15 they returned to London amid the frantic applause of the English people, bringing with them “Peace with Honour” in the Treaty of Berlin. But though the policy of calling in the military aid of our Indian fellow-subjects was so eminently successful from the diplomatic point of view, it was hotly contested by some of Lord Beaconsfield’s political opponents on constitutional or sentimental grounds. My old friend, Professor Chenery, the eminent Orientalist, was at that time editor of the *Times*, and warmly supported the Beaconsfield policy—and as I was then the Press Commissioner of India, and necessarily familiar with all the *minutiæ* of the question, he asked me if I would endeavour to obtain the permission of the Government to undertake its defence in the columns of the *Times*. Lord Lytton gladly gave his permission and obtained that of Lord Beaconsfield.

The objections to that policy were of a twofold character, constitutional and sentimental. The constitutional objection was really a survival of the old Whig dread of

a standing army in England, as liable to be used by the Sovereign to subvert the liberties of the people. The extreme Radicals who held this view had hotly opposed the assumption of the Imperial title in India by Queen Victoria, on the ground that the Empress of India might endeavour to impose Cæsarism—or, as we should now say, Kaiserism—on the people of Great Britain! And so, in 1878, they opposed the legitimate use of Indian troops in the Mediterranean, lest Queen Victoria should bring them to England to set up a despotism! Now, only thirty-six years later, I suppose no one out of Bedlam would support such a preposterous objection.

The sentimental objection of the extreme Radicals was founded on simple and abysmal ignorance of India and Indian chivalry. They called all Indians "Natives," and their idea of a "Native" was something between Man Friday and the South Sea gentlemen who in those days used to eat missionaries. They declared that we wished to bring into civilized European warfare savages worse than the old "Red Indians" of Cooper's novels. Since then, some Radicals have travelled in India—and even "Padgett, M.P." himself would now confess that it would be a gross insult to compare the Indian Army with the modern Huns who have been committing their atrocities in Belgium and at Rheims.

And now that the policy of Lord Beaconsfield and Lord Lytton has been finally and definitely adopted by Lord Crewe and Lord Hardinge, what are the results that we may reasonably hope for?

Well, Lord Hardinge, in his sympathetic speech to the Imperial Council at Simla on September 8, indicated a very important one, that is very near the heart of every well-wisher of the Empire. When the gallant troops that are hastening to our aid from every one of the self-governing Dominions have fought side by side and shoulder to shoulder with the equally gallant troops from India, they will surely see, as we Anglo-Indians see, the utter absurdity, as well as

the monstrous injustice, of regarding our Indian fellow-subjects askance as if they belonged to an inferior race. And in this way I think we may all hope, as Lord Hardinge hopes, that one of the most difficult and distressing of our Imperial problems may yield, as the Viceroy said, to "fair and generous treatment on both sides." Both the Colonies and India have a right to maintain each their own views, and even their own prejudices, in their own lands; but fuller knowledge and closer comradeship will take all the bitterness out of those views and those prejudices.

Then, too, the old foolish ideas about "Natives" must surely be altogether abandoned. As Lord Curzon said at Hull on September 7, the Indian troops are "not inferior to, but in some respects the most efficient of, the whole army. The martial spirit in India is traditional and famous." And he added that "it would be an act of folly to refrain from using such troops" wherever the Empire calls them and they desire to go.

And again—large bodies of Indian Chiefs, Indian officers and Indian soldiers will be brought into close contact with Englishmen, with Frenchmen, with Russians, with Germans and with people of the other European nationalities. It may confidently be hoped and believed that they will carry back with them to India an even stronger affection than that which they already feel for the civilization and the race with whose fortunes their own fortunes have been so closely linked by Divine Providence. They will recognize more closely than ever that they are "citizens of no mean city," and that the Empire of which their own country forms so important and prosperous a section is one to be thankful for, and to be proud of, in no stinted measure.

ENGLAND, RUSSIA, AND INDIA

WE print below lines written by Dr. J. Pollen on leaving Russia in 1891 :

Russia, farewell ! ere leaving thee
 I learned to love thy much-wronged race,
 Thy misread Past aright to see,
 Thy glorious Destiny to trace,
 To know thee as thou truly art
 (Whate'er thy slanderous Foes may bawl),
 A people great, with kindly heart,
 Helping the hurt, forgiving all.
 Alone against Napoleon's pride,
 When Europe groaned beneath his sway,
 Didst thou arise, and roll the tide
 Of conquest back, and hold thy way
 Till thy victorious banners flew
 Across the sunny vines of France,
 And well the streets of Paris knew
 Thy Cossacks' and thy Uhlans' lance.
 When jealous Europe 'gainst thee strove,
 How nobly didst thou stand at bay !
 And Sebastópol's Heights can prove
 How brave thou wast in trial's day !
 And all that woe against thee wrought
 Thou hast in full forgiven, forgot ;
 The Foes who then against thee fought,
 As Foes are now regarded not.

* * * * *

Then, England, pause ! know friend from foe !
 Where, when, has Russia crossed thy path ?
 That she doth ever greater grow—
 This seems the greatest fault she hath.

In truth, the "Teuton" is thy foe !
Thy rival he, in every field ;
His power thy Court—thy Councils—know,
Thy Commerce nought from him can shield ;
His Princes lead thy Daughters forth
Dowered deep in dowers of English gold ;
His merchant vessels sweep thy North ;
Thy "silver streak" his Warships hold.
He threatens thee on every side ;
While thou dost bend to him and yield,
Surrendering to his growing pride
The best of thy Colonial field.
He stirs the Russ against thy power—
Pointing to plains of Hindustan—
Hoping to stay the dreaded hour
When France will meet him, man to man.

* * * * *

But why should England cross the Russ ?
We both have kindred work to do !
Asia is wide ; for him, for us,
There's space to spare, with high aims too.
Redeem the cradle of our race,
Let Commerce circle everywhere !
Let Love regain its pride of place,
Let Eden once more blossom there !
Let "great white Czar," let "great white Queen,"
Stretch forth o'er Asia healing hands,
Touching the sere leaf into green,
Blessing with bloom the barren lands.

* * * * *

England and Russia—friendly Powers !
India secure, and strong and free—
Over the West no war-cloud lowers—
The East regains its liberty.

J. POLLEN.

THE BRITISH INDIAN ARMY IN EUROPE

Two months ago few of the citizens of the British Empire had any inkling that one of the greatest, if not the greatest, war that history has recorded was imminent. The proof which we now—now that our eyes are opened—possess that the innermost circle of His Majesty's Government knew what was boding is that great Naval Review which, in the month of July, was suddenly and unexpectedly announced as shortly to take place. Normally, Naval Reviews are preluded by ample notice. This one burst upon us. Yet we took it as a matter of course, scarce troubling our minds to reflect upon what it possibly foreboded. For this masterly stroke of mobilization, carried out, if report be true, against the more timorous counsels of the rest of the Cabinet, we are indebted to the First Lord of the Admiralty. All honour to him. Rightly was he greeted when he stood on the platform at the Guildhall beside Messrs. Asquith, Law, and Balfour, with enthusiastic expressions of the public regard. A strange coincidence, we had thought, that Naval Review on the eve of Austria's ultimatum to Servia! There was more method in it than one surmised at the moment. To this promptness and decision of action the French and Belgian coasts owe immunity from naval attack, the Allies are indebted for the ability to transport troops as they please, and Great Britain herself owns a free passage through the

Suez Canal and the Mediterranean for that powerful Indian contingent which, doubtless ere this, has disembarked on the shores of France.* There have been moments during the past month when it has seemed as though the great daring and ruthless ambition of the Kaiser were threatening to crown themselves and him with success. But now, when the tide of battle is turning in the North of France, when the loyal soldiery of the Overseas Dominions and the great Dependencies of the Crown have reached the theatre of war, and when Russian troops press forward from the East to meet the Allies advancing from the West, we begin to understand, almost to sympathize with, the feeling to which the late German Ambassador is said to have given expression as he left Carlton House Terrace: "I am a ruined man." Will it be any consolation to him that his Master and his Empire will share his ruin?

To the British nation, with a heart already gladdened by the success of the last few days, is now proclaimed the noble effort which the Viceroy and his Council and the Indian Princes and people of India have made to support the British Realm in the momentous struggle to which the unscrupulous ambition of the Kaiser has committed it. The despatch of 70,000 men to Europe means a very vital contribution towards the successful issue of the war. We welcome them the more in that they come, not at the moment when the fortunes of the Allies were on the wane, but in the hour when the combined armies of Great Britain and France, supported by game little Belgium, have commenced to press the Teuton back on to his own soil. It is more congenial to our thought that the brave Pathan, Panjabi, Baluch, Sikh, Rajput, and Gurkha should range up alongside, when with bayonet and bullet, sabre and shell, we are pushing the foe before us, than that they should arrive to change a retirement into an advance. We reflect with sorrowful, almost bitter thoughts, on the

* Mr. Asquith announced at Dublin on September 25 that the first contingent of Indian troops was due to land at Marseilles that day.

terrible losses borne by the Yorkshire Light Infantry, the Gordon Highlanders, the Munster Fusiliers, the Dorset and Cheshire Regiments, and other corps, but we rejoice that their magnificent example is before the Indian soldier races, to tell them that the Briton who, under Clive, Coote, Lawrence, Dalton and others, made India British in the eighteenth century is still the man he was. We all know that there has been a miserable apprehension on the part of the Indian Government and of the small-minded men who are so often selected to hold high official military or civil appointments, that the native of India should learn that he is as good a man at shooting and games as his more fair-skinned brother.

When I first went to India, rifle matches were open to British and Indian troops combined, and the Poona Musketry Cup had already been won for two successive years by the regiment which I afterwards commanded, the 129th (Duke of Connaught's Own) Baluchis, when out came the order that, at Presidency rifle meetings, British and native troops were to compete separately. That musketry cup never stood on our mess-table, as we had hoped that it would. If the information that has reached me be correct, the 129th Baluchis forms part of the Indian Expeditionary Force.

When British and Indian troops have fought shoulder to shoulder together, there will be no more of this narrowness of spirit—a spirit which, we may be sure, Earl Kitchener never shared, although, when he did offer prizes for the best regiments in the British and Indian armies in India, he conformed to the old-standing and, in that case, convenient custom of making the two armies compete separately. It is extremely fortunate for India and for the Empire that, prior to this crisis, the Commander-in-Chiefship of the Indian Army has passed into the hands of Earl Kitchener's former trusted lieutenant and Chief of the Staff, Sir Beauchamp Duff, an officer still young and competent, and one who knows the Indian Army thoroughly.

We may venture to say that no Indian army despatched from India, and containing in its ranks the *élite* of India's feudal chivalry, would have been complete without Maharajah Sir Pertab Singh, the Regent of Jodhpur. As a *preux chevalier* he stands, and has long stood, foremost amongst Indian princes. We welcome cordially all those Indian chiefs and notables who are his comrades in arms, and we rejoice to know that the Viceroy has, out of the Imperial Service Troops, accepted from twelve States contingents of cavalry, infantry, sappers, and transport, besides the Bikanir Camel Corps. The Punjab and Baluchistan have also, be it noted, offered camels. How these would astonish Europe! We conclude that their destination will be Egypt. It is not for me here to reproduce the despatch of the Viceroy which was read out to the House of Commons on September 9 by the Under Secretary of State for India. The facts given there speak for themselves. We feel that this unanimous response from all parts—from the most remote borders, Kalat, Chitral, Nepal, etc.—of the Indian Empire is a magnificent guarantee of the union between the United Kingdom and India for the future. Our humorists—and let us not take them too seriously—have pointed to the Kaiser as peacemaker between Carson and Redmond. The same worker of miracles—did we know more of his prototype, Attila, or, as Professor Cramb has it, Alaric, we might find him, too, doing good unbeknownst—has made Mr. Tilak stand forth as a loyal subject of the British Raj. We scarce know yet how deep we stand in the Kaiser's debt, but we look forward to acquitting ourselves of our obligations by bringing the Hohenzollern and the Habsburg to their knees; by encompassing Kiel, Wilhelmshaven, and Heligoland with a British fleet by sea, and army by land, and by restoring Schleswig-Holstein, with the Kiel Canal and Heligoland added, to Denmark. If the Duke of Brunswick chooses, it rests with him to be once more the King of Hanover. In this good work we are glad that our brother-soldiers of

the Indian Empire, the men with whom we have fought on the North-West Frontier, in Burma, China, Egypt, Afghanistan, Africa, and Persia, in the fastnesses of the Himalayas and the darkest jungles between the Irrawaddy and the Salween, should again be our comrades. Unquestionably this new experience will open their eyes, and widen their ambition. For some time past the relative position of the British and Indian officer has afforded a crux difficult to solve; and there are other problems—to wit, the relations between the Mussulmans of the British Empire and the Caliphate, and the question of the admission of Indians into the self-governing Colonies—which await solution and settlement. The admission of Indian troops to European warfare sheds a new light on these questions. Those fine soldiers, the Sikhs, are the very men whom Canada has ejected, *vi et armis*; and now, equally *vi et armis*, men of the same race join the Canadians in defence of the Empire. If the result of this war be to overthrow German influence in Turkey, we may hope that, for a time at least, the Pan-Islamic agitation may cease. One of the questions on the Paper for the House of Commons on September 10 was: "What steps are being taken to counteract the organized efforts of Germany to arouse Pan-Islamic feeling against England in India and other British possessions having Muhammadan populations?" The best answer to that question was given in the Viceroy's telegram of September 8, which was read to the House of Commons by the Under Secretary for India on the previous day (9th). Among the communities from which the Viceroy had received offers of service are enumerated: "The All India Moslem League, the Bengal Presidency Moslem League, the Moslem Association of Rangoon, the Trustees of the Aligarh College, the Calcutta and Punjab and Eastern Bengal Moslem Leagues, the Khoja Community and other followers of Agha Khan." Finally, "The Delhi Medical Association offers the field hospital which was sent to Turkey during the Balkan War." These facts will enable

Turkey to realize the trend of Islamic feeling in the British Empire, and the fallacy of supposing that that feeling will lend itself to be the instrument of German intrigue. Add to these the message sent by the committee of the London All India Moslem League to the Indian troops, as published in the *Times* of September 9, a word of caution to Turkey being at the same time added.

It has gone to the heart of many of us to picture the intensity of the struggle which our gallant army maintained against an overwhelming force of Germans from the 23rd to the 26th of August. In the first list of casualties published the heavy loss suffered by the King's Own Yorkshire Light Infantry was very much in evidence—viz., eleven officers killed, three missing, two wounded. From the pen of one of those killed had emanated in August, when his regiment was on the eve of sailing from Dublin to Havre, a remarkable article entitled "Moral Qualities in War," to which the editor of *Blackwood* very justly, in view of its high merit, accorded the foremost place in the September number. It is a singularly fine bit of writing, and, in passages, prophetic. After relating two stories of Japanese self-sacrifice and devotion (the writer served through the siege of Port Arthur and spent some years in Japan), he concludes his article with these words: "This is the spirit in which soldiers must go forth to fight. Not dreaming of the home-coming, the medal, the battle. These are distant and problematical. Nearer and more probable are the enemy and the tomb. '*Few, few shall part where many meet.*'" The *Times* of September 17 pays, as the mouthpiece of the editor of *Blackwood*, a high tribute to the writer.

This article in *Blackwood* left on my mind the feeling that the man who wrote it wrote, as it were, under the spell of a coming destiny. Happily the destiny was not fulfilled to the letter. If the words "Exegit monumentum, ære perennius" seem to lift our thoughts to some degree of sublimity, the sublime was not absent from that which

might have proved to be a parting message.* In the noble deaths of many gallant officers and men who fell when the Germans, outnumbering them five to one, pressed them back on Paris, our Indian comrades have an example which they may equal but cannot surpass. It has probably escaped the memory of most people to-day that in 1900, during the relief of Peking, the German troops under Field Marshal von Waldersee treated the natives of India with studied insolence. Sir Pertab Singh will not have forgotten that, and we can hardly doubt that those who served in the International Force which relieved and occupied Peking will have told their comrades in arms now ordered to Europe that there is an old score to be wiped out. At that time I was employed at the War Office, and was charged with the record of the Boxer outbreak, and the scant sympathy that existed between Sir Alfred Gaselee's contingent and the Germans, and the absolute hatred felt by the Japanese for the German, remain imprinted on my mind. German, and more especially Prussian, "insolence" has, since 1870, been the theme of conversation of all Europe. Asia now, as well as Europe, rises to chastise that "insolence."

Of those Indian soldiers who are now coming to Europe there are few or none whose forbears have not been our opponents in the battlefield. A century has elapsed since Sir David Ochterlony led our troops against the Gurkhas of Nepal; with the Pathans we have been at war incessantly since 1838; the Sikhs came under our sway in 1849, and brought with them all the heterogeneous fighting races of the valleys of the Five Rivers; the Baluchis succumbed to Sir Charles Napier in 1843, and he it was who, between 1844 and 1846, raised the originals of the Baluch regiments which are still numbered among those of the Indian army, but have scarce a Baluch in them. As to the Rajputs, there is reason to believe that they passed

* On September 15 it was known that the writer, reported "killed" on September 3, was alive and a prisoner in the citadel at Magdeburg.

more peacefully under the British rule, unless, indeed, we may count the dynasty and people of Bhartpur as Rajput. In the days of Lake and Wellington it was the Mahratta who held sway from Sattara in the south almost to the confines of Delhi. Holkar, Scindia, and the Peshwa, whether with their own Mahrattas or with the levies trained by European adventurers, such as De Boigne, Reinhardt, George Thomas, Perron, Skinner, and Gardner, long contended with the British for the succession to the dying Mogul power. It would seem as though the restless, turbulent spirit of the Mahratta of the seventeenth, eighteenth, and early nineteenth centuries were dead. The Mahratta no longer enlists. Yet to Lake and Wellington he was a formidable foe, and the name of Sivaji still recalls daring exploits which might rival those of a Drake, a Raleigh, or a Jack Sheppard. The ordinary Englishman sums up in the ungeneric term "Gurkha" the whole of the fighting classes of India; whilst even a statesman and ex-Viceroy like Lord Curzon perpetrates an anachronism by saying he would like to see "the Bengal Cavalry" charge. As his lordship knows, even in his day, no Presidential army any longer existed; and under Lord Kitchener the entire Indian native army was renumbered without reference to class or country. The expression "Bengal Cavalry" is to-day unknown. It is all "Indian Cavalry." In the infantry the Indian Army List still distinguishes Pathans, Punjabis, Sikhs, Baluchis, Gurkhas, and Rajputs.

These Asiatic races have learned some familiarity with the streets and environs of London; but to them Paris and Brussels, Berlin and Vienna, will be a new experience. Shall we see them encamped in the Prater and the Unter den Linden? Will these swarthy visages strengthen the hands of the British plenipotentiaries to whom is entrusted the repartition of Europe? If the Paris of 1815 saw the Croat and the Cossack, will the Berlin of 1915 see the Sikh and the Pathan? The Kaiser will then realize the depth of his own folly. The one thing

that has undoubtedly, perhaps more than anything else, impelled him to risk a war with England has been Germany's need of Colonial expansion. No. 85 of the White Book (correspondence regarding the European Crisis), No. 6 of 1914 makes it plain that Germany fully intended, if victorious, to annex all the French Colonies. The issue of this war will probably be the annexation by Great Britain of every German colony, those of the Pacific being handed over to the Australian Commonwealth or to New Zealand, and those of Africa to our several African Protectorates; and Germany will continue, in the words of Professor Cramb, to "export her surplus energy to America, to England and to other alien lands, and to bequeath the worth and valour of her best and most enterprising citizens to those nations who may be alternately Germany's deadliest enemies." *Vae Victis!*

The Indian Expeditionary Force gives the Indian Branch of the St. John Ambulance Association its first notable opportunity for proving its value. In 1901, under the auspices of the late Viscount Knutsford, the organization and establishment of this important institution began, and until 1905 was entrusted to me, as Honorary Organizing Commissioner of the St. John Ambulance Association for India. Under Lord Curzon's orders, a Committee, of which Lord Kitchener was Chairman, took over charge from me at Calcutta on March 31, 1905. As is generally known, the Indian Branch is now a widespread and powerful organization. On August 13 last its Committee met at Simla to devise measures for the ambulance service of the Indian Expeditionary Force. The Indian Branch now promises to justify the eulogium pronounced upon it by Viscount Knutsford in the House of Lords on July 11, 1910.

A. C. YATE.

THE OPENING OF THE EASTERN CAMPAIGN

BY E. CHARLES VIVIAN

IN order to grasp clearly the significance of the Austro-German campaign against Russia, it is necessary first to understand the nature of the aims of the Germanic Powers. It was necessary, in the German scheme of things, that France should be crushed down to the position of a second-rate Power, and, since England intervened, it was also necessary that England should share the fate of France. These two nations were to be reduced to such an extent that neither should ever exhibit rivalry with the German schemes of military and naval expansion. They were neither to be annihilated nor made tributary States, but were to stand as weak, second-rate Powers, useful for the consumption of German products, and consenting, perforce, to German plans and ideals.

With Russia the case was different. The configuration and extent of Russia, combined with its vast resources, rendered, and will always render, the reduction of Russia from first to second-class standing an impossibility, and German ambition has always recognized this fact. Invasion, even to the occupation of Moscow, has been proved futile, and the occupation of Petrograd would not touch Russian power to any appreciable extent; the tremendous military resources of the great Slavonic Empire would only increase as an

invading army penetrated into its territory, and any attempt at crushing Russia would lead to inevitable defeat. In simple terms, the German plan was to crush France, and incidentally England, that Russia might see them no longer as desirable allies. In the meantime the German and Austrian forces on the western Russian frontiers were to demonstrate to Russia the impossibility of penetrating into either German or Austrian territory with any lasting success. In this connection the Russian operations in East Prussia have admirably fulfilled German intentions. A Russian force has advanced—prematurely, as the event has proved—into East Prussia, and at the outset this force achieved considerable successes. German reinforcements, however, have driven back Rennenkampf's cossacks on to their main body, and that in turn has proved unable to withstand the attacks of the reinforced German troops, who have driven back the Russians until the country of the Masur lakes is practically in German hands again at the time of writing. This has been accomplished by taking over troops from the French area of battle, and the French area alone prevents Germany rendering its eastern frontier invulnerable against Russian attacks. Had the French campaign been ended in six or seven weeks, as according to German calculations it ought to have been, and had the Austrian forces been as well able to stand against Russian attacks as the Germans in East Prussia, Russia would have found invasion of German and Austrian territories a futile business, and, after half a dozen or so of attempts and failures, would have found the business too costly both in lives and money. There would, according to German plans, have been an agreement between Russia on the one side, and the Teutonic Governments on the other, to pursue the ideal of world-power, unhampered by the crippled French and frightened English. For a consideration, Russia was to acquiesce in the expansion of which Germany dreamed; not because this was congenial to Russian plans, but because the German and Austrian Powers would be too strong to

quarrel with. All the German and Austrian action was to take the form of blocking Russian invasions. Poland, that peninsula encircled by German and Austrian frontiers, would, of course, have become Teutonic territory, but, for the rest, Russia would have been left untouched, and become a partner in a new triple or quadruple alliance—Italy being the possible fourth partner.

Thus things were to have fallen, according to German plans. It was, in the first place, the resistance of Belgium that saved Europe from the realization of these plans; later factors in the process of salvation were the co-operation of the English forces with the French, and the unexpected weakness of the Austrian army, both in strategical and tactical dispositions, and in the actual value of the fighting men and their equipment—this last a factor which has played a more important part than most people realize.

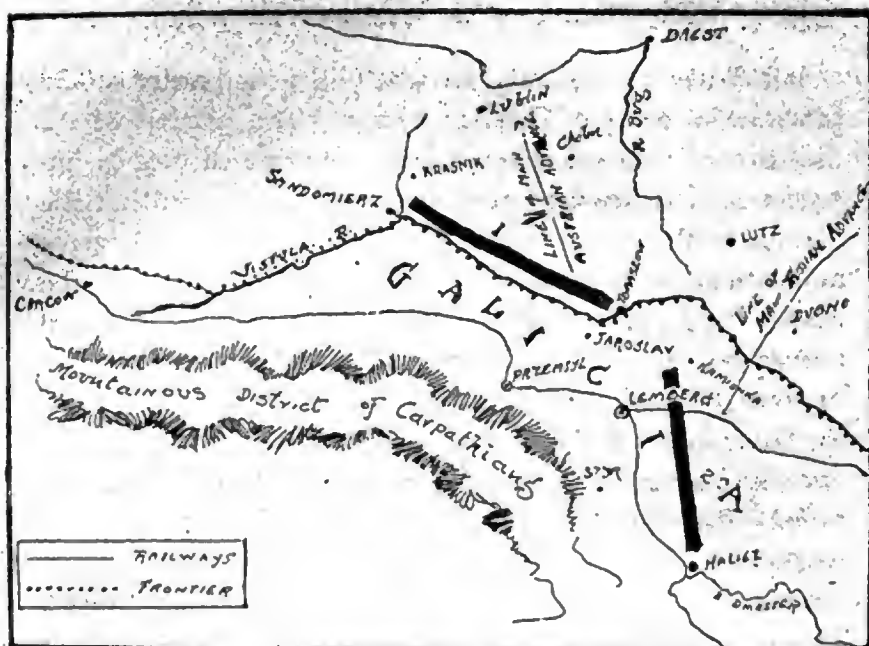
The Russo-German campaign in East Prussia, up to the time of writing, presents no points that call for detailed attention in such a sketch as this; the Russian advance here has proved premature, and thus has been driven back. Since so many of the German troops are still locked away in grips with the French, this disability to Russia will adjust itself in course of time; Königsberg will fall, and then Dantzic, and by that time Germany will have to consider the problem of putting Berlin in a state of defence, for the centre and south of the Russian attack will almost inevitably develop more quickly than the morass-choked northern advance.

Of the army of the centre there is little news of importance as yet. This is inevitable, for the configuration of Western Russia is such that a direct advance on Central Germany would be an invitation to disaster. The flanks must be secured, East Prussia masked, and Galicia fully occupied, before the central army can begin its march on Posen in earnest; otherwise the Russian lines of communication could be cut by flanking German and Austrian forces, and the central Russian army, cut off from its base,

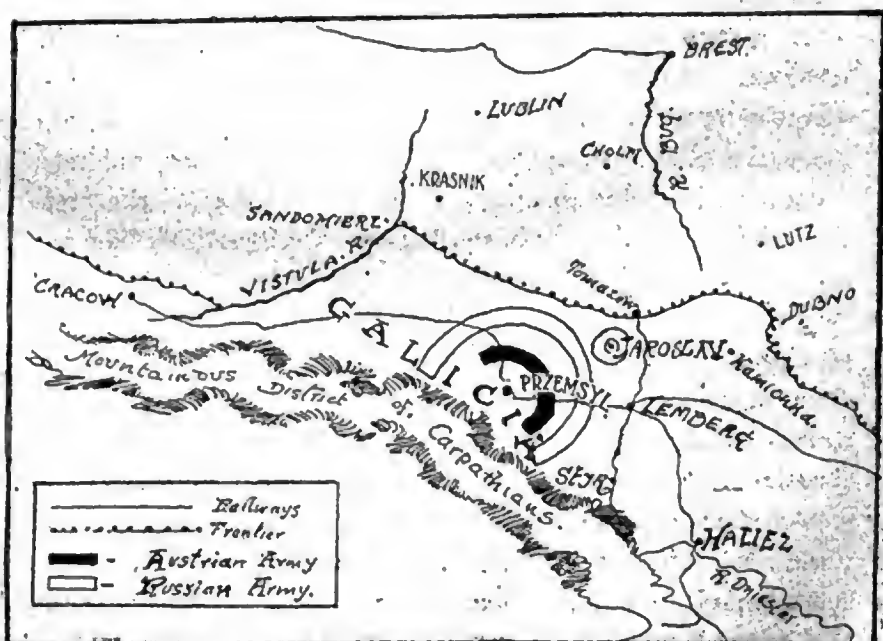
could be either annihilated or forced to surrender. Thus the central army of Russia, facing toward Posen from the district of Warsaw, must possess its soul in patience till Austria is crushed past taking the offensive, and till East Prussia—the German force there—is too busily engaged in defending itself to touch the communications of the main army. In these flanking operations the Russian campaign against Austria is not only the more interesting, but also by far the more important, and an analysis of the failure of Austria to play the part allotted to it in the German scheme of things becomes necessary to comprehension of the Russian offensive now proceeding.

The accompanying sketch-map shows the position at the outset of the Austro-Russian campaign. Excluding the forces engaged in the Servian "punitive expedition," the main body of the Austrian army was divided into two forces, which were placed on the northern slopes of the Carpathians, facing north-eastward, with a view to invading and subjugating Russian Poland, or, at the worst, holding the Austrian frontier. The more advanced, or first, Austrian army, with a front of about eighty miles, was aimed at the Polish Government of Lublin, with its right flank resting on Tomaszow, and its left on Sandomierz. Behind it was Przemyśl, one of the chief fortified places of Austrian Galicia. Its strength, as far as can be ascertained, was nearly half a million men.

The second Austrian army lay almost at right angles to the first, having its right flank based on Halicz, and its left on Kamionka, while Lemberg, which may be termed the Aldershot of Galicia, was the base in its rear. It set out on a north-eastward advance at about the same time that the first army set out. At first the first army was fairly successful; it came up against no insuperable obstacles, and the invasion of Lublin was proceeding just as Austro-German plans meant it to proceed—until the second Austrian army came up against the main body of the Russian attack.



PLAN I.—SHOWING APPROXIMATE POSITION OF MAIN AUSTRIAN ARMIES ON THE RUSSIAN FRONT AT THE OUTSET OF THE EASTERN CAMPAIGN. (NOT DRAWN TO SCALE.)



PLAN II.—SHOWING APPROXIMATE POSITION OF RUSSIAN AND AUSTRIAN MAIN ARMIES OPERATING IN GALICIA ABOUT SEPTEMBER 20, AND ILLUSTRATING THE WAY IN WHICH THE BREAK-UP OF THE SECOND AUSTRIAN ARMY FORCED THE FIRST, OR MAIN, ARMY, TO RETREAT ON PRZEMYSL. (NOT DRAWN TO SCALE.)

It had never been intended that this second army should sustain the brunt of Russian attack. The placing of the first army demonstrates that it was considered first in importance, and destined to play the leading part; but the admirable strategy of the Russian Staff let this first army advance, and concentrated attention on the second, with the result that Lemberg fell to Russian arms, and the second army was, if not annihilated, thoroughly defeated and broken. By this means a double object was attained. In the first place, Austria was deprived of the important base and all its contents at Lemberg—a stroke of which the moral effect was as great as the actual effect—and the weakness of the Austrian force was thoroughly demonstrated, as well as the rapidity of the Russian striking power. In the second place, the destruction of this first army's effective laid open the flank of the first army to attack, and rendered necessary a reorganization of the whole Austrian plan of campaign.

A glance at the second sketch-map will render this obvious. With the second Austrian army rendered ineffective, the first army can no longer advance forward; since the Russian army is in such a position that, holding Lemberg, it is able to attack Przemyśl and cut off the first Austrian army from its base of supplies, proceeding then to attack the Austrian force in rear.

To ward off this danger, two or three courses were open to the Austrian commander. Out of them he chose to attempt, using his right flank as a pivot, to wheel his force round so as to face toward Lemberg and cut the main Russian line of communication with the Polish bases. It was a daring move. Success would have meant the ultimate envelopment of the Russian forces operating in Austrian Galicia, or, at least, a good part of them. On the other hand, failure meant—well, practically what the event has proved. Russia is very nearly free, at the time of writing, to turn its attention to Germany by way of the rich district of Silesia.

At the time of writing, the downfall of the Austrian military power is not quite complete. Jaroslav is being bombarded by Russian artillery, and, if optimistic reports may be believed, the march on Cracow is just beginning. Przemyśl has yet to fall, and it is likely that the siege will last some time, for the Austrian army, which has been driven back on this strong fortress, is likely to make a desperate fight before surrendering—trapped animals bite deeply. Dankl's 150,000 men are said to be surrounded—in any case they have become cut off from the main body of the surviving Austrian forces, and are capable of resistance only, not of attack, while their position, hemmed in by a superior Russian force, is not an enviable one. No matter where one may look in the eastern theatre of war, signs are to be seen of the downfall of Austria as a military Power. The Dual Monarchy has maintained the tradition set up during the last century, and has lost every decisive action in the campaigns against Russia and Servia from the beginning of this war. The military strength of Austria-Hungary was overestimated by itself and its ally, for neither took into account the racial antagonisms that have made the Dual Monarchy a house divided against itself.

We shall see soon—this much of prophecy is safe—the Russian forces in the south-east marching on Cracow and Breslau, with Germany alone as opponent, for the star of Austria has set. While in the western theatre of war the Allies hold their ground—they need not do more than hold on, for the present—the nation that has sown the wind for many years is about to stand utterly alone to face a whirlwind from the east. After eight weeks of war, as was the case after the first German rush on Luxembourg, the work of France and England in the west is to repel rather than to attack, while Russia marches to complete the destruction of militarism among the Germanic races—the task already partly accomplished by the overthrow of Austrian forces. The end, though yet far off, perhaps, is already in sight.

PROCEEDINGS OF THE EAST INDIA ASSOCIATION

DEVELOPMENT OF COTTON IN INDIA : SIND, A SECOND EGYPT

BY T. SUMMERS, C.I.E., D.SC., M.I.C.E.

ONE hears a great deal about Egypt's valuable cotton, and of cotton-growing in Africa and other British dependencies ; but Sind, the greatest and best field for the development of cotton, is still comparatively unknown. In an article on the extension of cotton-growing, in the *Times* of September 22 last, it was stated that "in India and Ceylon the outlook is not encouraging, although it was to India that the industry has looked for the most speedy relief from short supplies."

My object in writing this paper is to do what I can to make this rich province better known, and its great potentialities as a cotton-growing country. Its fertile soil is composed of silt like that of Egypt, and can produce cotton of excellent quality.

Sind, which Sir Colin Scott-Moncrieff anticipates is destined to become the "Garden of India," and which another Scotsman, James Burnes (a cousin of Robbie Burns), surgeon to the Residency at Bhuj, called "Little" or "Young Egypt" more than seventy years ago, is capable of producing a million bales of cotton, which will be a considerable addition to India's present crop of five million bales, and also to the world's cotton crop.

SIND'S FERTILITY

Sind is an alluvial plain, almost every part of which has been swept, during thousands of years, by the River Indus or its branches.

Whenever the river changes its course, it leaves behind it valuable deposits of fertilizing silt, in which cotton and almost any other crop will thrive.

As Egypt's fertility is due to the silt which the Nile has been depositing for thousands of years, so is Sind's great fertility due to the silt of the Indus.

The Indus used to distribute its silty water on the high ridge along which Alexander the Great, in his travels through Sind, sailed with his fleet of boats, and on which the Rohri Canal will flow (Fig. 1). Distinct traces of old canals can be seen on this highland. One of them, I found, had been 80 feet wide at its bed, 15 feet deep, and about 150 feet wide at its water-surface.

As showing that a higher state of civilization existed in Sind, it is interesting to note that these ancient canals were straighter than the canals made in more recent years. Judging by the large quantities of burnt bricks still lying about, the houses along their banks had been built of kiln-burnt bricks, while those of the present time are nearly all built of sun-dried bricks.

THE INDUS RIVER

Sind may be compared to a great gold-field which has been lying uncared-for and unworked for ages; but few gold-fields contain such wealth as can easily be obtained from her fertile soil.

The Indus brings to her door—

- (a) *Snow*, which is stored on the Himalayas till melted by the sun, just when required for cotton.
- (b) *Silt* as a fertilizer, from erosion of the mountains in her catchment.

- (c) *Seepage* from the great Punjab irrigated tracts, which keeps up the supply in the river during the cold season, when all the snow has melted (Appendix I.).

Only about 15 per cent. of this water, with its valuable silt, is used when the river is in flood, the rest being allowed to flow uselessly to the sea.

Then in Sind we have—

- (a) *Soil*, the accumulation of silt deposited by the river.
 (b) *Sun*—sometimes a little too much of it.

These also are of little use without water from the Indus, as the scanty rainfall in Sind, which varies from 2 to an average of 6 inches, is practically useless for cultivation.

When the *snow*, *silt*, and *seepage*, are combined with *Sind's sun* and *soil*, Sind will blossom forth as the Garden of India. This will not take long, as the tracts to be developed first have railways running through them to the great port of Karachi, where the wharfage is being doubled in readiness for the coming development of irrigation.

My life's work in India has been to follow in the footsteps of Colonel Fife, Mr. Joyner, and other engineers who have advocated Sind's need of flow irrigation by high-level canals, and my ambition is to see a start made with Sind's great schemes.

REASON WHY COTTON HAS NOT INCREASED

The main reason why cotton has not increased to any extent is that this province is irrigated almost entirely by low-level inundation canals. As these canals depend upon the rise of the Indus in its flood season, their supply is naturally uncertain, and many of them only get water for two to three months in low inundations, while Sindhi and American cottons, on which the great Sind Irrigation Scheme is based, require four to five months' water.

This uncertainty forces cultivators to grow rice—which requires a large quantity of water for a short period—and other crops of little value, instead of the far more valuable cotton.

The Jamrao Canal, which was opened in 1899, and is the only really perennial canal in Sind, grows about 100,000 acres of cotton, and could grow more if it had a greater discharge.

WHERE EXPANSION OF IRRIGATION SHOULD BEGIN

Where the land lies low compared with the river, so that water can flow on to it by gravitation, the favourite crop in Sind is rice, which is called a “wet” crop. It requires two to two and a half times as much water every month during its season of growth as cotton and other “dry” Kharif crops.

Sind grows over a million acres of rice, some of it, such as that grown at Larkhana, being famed throughout India.

The Sindhi loves rice, and will not easily be induced to change it for cotton, unless he can be convinced that cotton pays better.

Fortunately, however, for cotton development in Sind, there is an immense area of about 6,000 square miles, 300 miles in length, on the left bank of the Indus, which lies so high above the river that it cannot obtain water for rice by flow, and it is too costly to lift water for rice cultivation.

In this paper I shall deal with 5,000 square miles (3½ million acres) of this area, most of which lies between Rohri and Hyderabad, in which I spent twenty years of my life as an Engineer.

The only crops grown at present in this tract—owing entirely to want of water, as it is well populated—are 100,000 acres of cotton and 550,000 acres of other dry crops, or only about 20 per cent. of its gross area, while in the low-lying tracts irrigated by the Ghar, Sukkur, and Western

Nara Canals (on the right bank of the Indus) over 40 per cent., and in the Chenab Colony over 70 per cent., of the gross area is now cultivated annually.

If flow water is given to this land, the Revenue department estimates that the present cultivation of 650,000 acres will be doubled soon after the new canal is opened, and eventually—with the help of a barrage, if required—the area is likely to go on increasing to 2 million acres, and to bring in to Government a net annual profit of $\frac{1}{4}$ to $\frac{1}{2}$ a million sterling.

REASONS WHY THIS TRACT REMAINS UNDEVELOPED

The section across Sind at latitude $26^{\circ} 45'$ and mile 86 of the Rohri Canal (Fig. 1) shows—

(a) That the ridge on the east of the river, on which the Indus used to flow, is fully 15 feet higher than the land on the west.

(b) That the full supply level in the Rohri Canal (R.L., 144) will be 11 feet higher than the full supply level in the old canals (R.L., 133), and that the full supply in the new Dad branch (R.L., 138) will also be 11 feet higher than that in the present Dad Canal (R.L., 127), which runs in low ground, like many inundation canals.

(c) That full supply in the Rohri Canal (R.L., 144) will be 19 feet higher, and that full supply in the present Western Nara (R.L., 123) is 2 feet lower, than the highest observed flood-level in the Indus (R.L., 125) at the same latitude.

(d) That it is practically impossible to irrigate the ridge on which the Rohri Canal will run, and on which the North-Western Railway runs, by inundation canals, unless at great cost for excavation, and still greater cost to the cultivators for lifting water.

(e) That the subsoil water-level is from 40 to 50 feet below the ridge.

The following statement shows clearly the urgent necessity for the Rohri Canal:

Tract.	Gross Area commanded.	Cultivable Area commanded.		Present Annual Cultivation.	Percentage cultivated Annually—	
		Taken at Percentage of Gross.	Area.		Of Gross Area.	Of Cultivable Area.
1	2 Acres.	3	4 Acres.	5 Acres.	6 Per Cent.	7 Per Cent.
Chenab Canal, 1911-12	3,360,000	80	2,688,000	2,334,000	70	87
Chenab Canal, average of three years ended 1911-12	3,360,000	80	2,688,000	2,254,000	67	85
Right Bank Canal, proposed (includes Ghar, Sukkur, and Western Nara Canals)	1,679,000	70	1,175,000	661,000	39	56
Rohri Canal, proposed	3,086,000	75	2,314,000	650,000	21	28

NOTES.—1. The Chenab cultivates three times as much of its cultivable area as the Rohri Canal tract.

2. If the Rohri Canal comes to cultivate in time as large a percentage as the Chenab Canal—and there is no reason why it should not, with such great advantages as (a) the finest cotton land in India, (b) 700 miles nearer the Port of Karachi than the Punjab—it will cultivate $\frac{87 \text{ per cent.}}{28 \text{ per cent.}} \times 650,000 = 2,000,000$ acres = an increase of 2,000,000 - 650,000 = 1,350,000 acres, which at only Rs. 4 net profit per acre gives £360,000 per annum.

Column 7 shows the great scope for increase in cultivation in the Rohri Canal tract, which has simply been kept back by want of water, which it can very easily get.

VALUE OF ANNUAL COTTON CROP

There is a considerable difference of opinion as to the ultimate area of cotton likely to be grown on the Rohri Canal; but, as I have shown in Appendix II., the lowest estimate of area as given by Mr. W. H. Lucas, C.S.I., Commissioner in Sind, in 1910, is 470,000 acres of Sindi cotton, and the highest by Mr. Fletcher, while Deputy

Director of Agriculture in Sind, in 1904, was 800,000 acres of Egyptian cotton.

Taking the value of the crop at £9 per acre for Sindi cotton, and £15 for Egyptian, the value of a year's crop would be from 4 to 12 millions sterling.

Mr. Fletcher's estimate is generally considered rather optimistic; but, as the soil compares with that in Egypt, it is possible, and at any rate we can safely rely on a 4 million sterling crop.

I am confident that, if the cultivators are allowed to cultivate as much cotton as they like—and it will be difficult to prevent them doing so—the area will soon rise to 800,000 acres, which is only about 33 per cent. of the cultivable area.

Egyptian cotton has not succeeded yet on a large scale in Sind, owing to various reasons, and a project to cost several millions sterling cannot be based on this most valuable crop; but if it comes, Sind will not only be a rival to the Punjab in wealth, but may even rival Egypt.

The Rohri Canal tract now grows about 100,000 acres of cotton on its uncertain water-supply, but, with a certain eight to nine months' water, the area and yield per acre will increase very quickly.

In four years after the commencement of the Rohri Canal a million acres of land will be opened up for cotton, and in ten years the whole 3 million acres, so that there need not be long to wait.

HOW TO GET WATER ON TO THIS RIDGE

This question has been discussed during the last sixty years, since the idea of providing perennial irrigation by high-level canals to this great tract originated in the brain of that far-seeing engineer, Colonel Fife.

Almost all the engineers who have studied this question have come to the conclusion that the best site for the mouth of the Rohri Canal, which will irrigate this great tract, is at Sukkur.

Some of the reasons for the choice of this site are—

(a) It gives sufficient head of water to command every acre in about 8,000 square miles of British territory by flow.

(b) It takes advantage of a natural weir made by the Sukkur gorge and by a rock bar across the river, which raises the water-level from 3 to 4 feet in the flood season.

(c) The river is ponded up by the gorge, so that top water can be taken off at a low velocity, with little silt, as pointed out by Colonel Fife.

(d) The Rohri Canal mouth at this point will be on the main stream of the river, where sand-banks cannot form. It will be in the right place for the Sukkur Barrage, when it is made for the great Right Bank Canal, which will follow the Rohri Canal, and the Nara supply cultivation, as well as for rabi on the Rohri Canal, when rabi becomes popular.

Several sites have been suggested at different points below Sukkur. Some of the objections to such sites are—

1. The barrage could not be built anywhere near Sukkur, as it would interfere with the free flow in the gorge, the sand in which is scoured out during floods to a depth of over 100 feet.

2. No barrage founded on sand could stand within the influence of the discharge through this deep gorge, which extends for miles below Sukkur.

3. Any site, say, fifteen to twenty miles down the river would lose the advantage of the great head of water above Sukkur. As the river is constantly changing its course by oscillating from side to side, in a width of ten to fifteen miles, it would be very risky to build a barrage, costing 2 to 3 millions sterling, without very long guide banks to force the

river to flow over it, the cost of which would, as far as one can see, make it quite impossible for the scheme to be a paying one.

THE ROHRI CANAL

The Rohri Canal will run for its first fifty miles through Khairpur territory, and the first branch will take off from it at mile 41 (Fig. 2).

It is proposed to irrigate the Khairpur State by entirely separate canals, as the Rohri Canal will be in deep cutting at its head, so that branches from it would be at far too low a level to give flow irrigation to the State.

This arrangement will be very advantageous to the State, which will get a far better supply from above the gorge than their present supply from below it.

There will be no branches taking off from the Rohri Canal above mile 41, and, as the ground falls from Rohri, southwards, at about a foot per mile, while the canal will fall at only 4 inches per mile, the water-level, even in the rabi season, will come above-ground in about thirty miles from the head.

From this point onwards to mile 190, where it passes Hyderabad, the water-level in the canal will have to be dropped at convenient places by falls aggregating 40 feet.

The special circumstances which I have noted allow of the Rohri Canal bed being lowered to practically any extent, as shown in the section (Fig. 2), so that it can get its full supply in all seasons, whether the river is high or low, throughout the year.

HISTORY OF THE ROHRI CANAL AND SUKKUR BARRAGE PROJECT

I am sure that a sketch of the development of Colonel Fife's great idea, into what is destined to be the greatest irrigation scheme in the world, and estimated to cost about 10 millions sterling, will be of interest.

ROHRI CANAL ALONE

In 1847 the first recorded reference to a barrage at Sukkur was made by Colonel Walter Scott, of the Bombay Engineers, a nephew of Sir Walter Scott. He, however, dropped the question, as he was of opinion that, owing to the soft nature of the soil, "if a dam was established at Rohri (Sukkur) there is a positive certainty that the river would abandon its present course and assume a new one."

In 1851 Lieutenant Fife, R.E., made the first proposal to introduce high-level perennial canals into Sind, by making a canal from Rohri to discharge 2,000 cusecs to *assist* the existing inundation canals. In 1854 the Western India Irrigation Company revived the question.

In 1859 Sir Bartle Frere, Commissioner in Sind, pointed out that, "of all the sections into which he divided Sind for irrigation purposes, the section to which Captain Fife's present project relates—*i.e.*, that between Rohri and Hyderabad—is the largest, most important, best populated, and most valuable of all."

Fifty years later, Mr. W. H. Lucas, C.S.I., states in his Revenue Report on this project :

"The real work which the canal is designed to do is to convert lift irrigation into flow, and substitute a large perennial canal for a network of small inundation canals in a thickly-occupied tract and in an old and settled country, and to enable vast areas of occupied lands to be cultivated more regularly and with shorter periods of fallow than at present."

Sindhis have been looking forward to this canal for fifty years, and call it the "Sindh Sudhar" (Sind Improvement).

Mr. Joyner, who has made researches into the old history of Sind, states that Alexander the Great, in his travels through Sind 2,500 years ago, sailed down the Indus, which then flowed along the high ridge between Rohri and Hyderabad.

King Alexander's Secretary described this part of Sind as the most populous part of the world, and as highly cultivated and civilized.

Mr. Joyner also states that the great ruined city of Brahmanabad, which measures several miles in circumference, and is now twenty miles from the river, was undoubtedly on the river bank, and that there is evidence that it was destroyed by the river, and not by fire.

There is a well-known old Sindhi proverb that Sind will be happy once more when the river flows once again through the Hyderabad district.

It remains for Sind engineers to restore this fertile tract, by diverting on to it a small quantity of the water which is now flowing uselessly into the sea.

This can very easily be done by making the Rohri Canal.

In 1869 Fife's canal had, after much consideration, been increased to 7,000 cusecs, and its cost to 200 lakhs, with a return of 7 per cent.

In 1872 the Rohri Canal Scheme was abandoned by the Viceroy, acting on information laid before him while on a visit to Sind.

In 1877 Lord Salisbury, Secretary of State, drew the attention of the Bombay Government to the "unsatisfactory state of Sind irrigation."

In 1890 Lord Reay, while Governor of Bombay, took up the question and pressed for further inquiry.

In 1891 Mr. R. B. Joyner, C.I.E., pointed out the crying need for irrigation between Rohri and Hyderabad, and submitted an estimate for two canals to discharge 18,700 cusecs, at an estimated cost of 350 lakhs.

Mr. Joyner was thus the first to recommend a complete scheme to irrigate the whole of the great area, which includes the Rohri Canal and Jamrao Canal tracts, by two high-level canals from Rohri. The combined discharge of his two canals may be taken as 14,000 for the Rohri Canal and 4,700 for the Jamrao Canal.

In 1899 the Jamrao was opened as a separate canal

taking off from the Nara River, so that the area to be dealt with now is only the Rohri Canal tract.

In 1892 the scheme prepared by Mr. Joyner was abandoned, as it was said to be financially unsound.

In 1893 General Fife, who had never lost faith in his great Sind ideals, again urged the great necessity for the Rohri Canal.

In 1900 Mr. E. F. Dawson, Superintending Engineer, proposed a scheme for the Sukkur Barrage, to improve irrigation on the Right Bank Canals, but not to include the Rohri Canal. Investigation showed this to be a hopeless scheme.

In 1901 Sind engineers, in their evidence before the Indian Irrigation Commission, agreed that the withdrawals by new Punjab canals had not lowered the water-level of the Indus in Sind.

In 1903 the Indian Irrigation Commission, of which Sir Colin Scott-Moncrieff was President, discussed Mr. Dawson's proposal, and gave their opinion that the time had not come for such heroic measures, and that half a million acres of new cultivation would be required to pay for a barrage.

ROHRI CANAL AND SUKKUR BARRAGE

In 1904 (September) I submitted a note to the Government of Bombay on the effect of the withdrawals by new Punjab canals on the volume and level of the Indus in Sind.

I disagreed with the Sind engineers who gave evidence before the Commission in 1901, and pointed out that it would probably be necessary to construct weirs across the Indus, and even to curtail the quantity of water taken off by the Punjab canals, so that they might not ruin our Sind irrigation.

This was followed up by the Superintending Engineer of the Indus River Commission coming to the conclusion that the river-level had fallen about a foot, owing to the abstraction of 14,000 cusecs by the Punjab.

This conclusion, which was generally accepted, combined with my note, led naturally to a barrage being included in the scheme, and to its being called the Rohri Canal and Sukkur Barrage Project.

In 1904 (November) I was sent on deputation to the Punjab to report on the methods adopted for the improvement of inundation canals.

On my return to Sind, full of admiration of the Punjab perennial canals, I proposed (December, 1904) that the question of the introduction of perennial canals into Sind, which had been abandoned in 1892, should at once be reopened.

Subsequent investigations—fortunately for Sind—have proved that our fears regarding Punjab withdrawals were groundless, and that the Sind engineers, who had far longer experience of the Indus, were correct.

In 1906 (April), at my request, the Inspector-General of Irrigation visited Sind, and approved of the investigations which were being made.

In 1906 (July) a preliminary project was submitted to Government, with alternative estimates for the Rohri Canal, with a barrage and without a barrage.

From 1907 to 1909.—These three years were occupied in field-work, including 10,000 miles of levels over 6,000 square miles of country, much of it covered with jungle, which had to be cut through by axemen. Besides this, the whole tract was divided up into large squares containing 1,024 acres, the corners of which are marked by large boundary-stones. Each of these squares can be subdivided into sixty-four squares of sixteen acres when the canals are made.

This work, together with the preparation of a detailed project, cost about 3 lakhs of rupees (£20,000). The field-work was very trying in the great heat, and large numbers of the surveyors fell sick or gave up, especially those from the Punjab.

My assistant, Mr. Parulekar, broke down several

times, and I had to take leave myself, which caused some delay.

In 1909 a detailed project was prepared, which showed that for the present the Right Bank Canal should be omitted from the scheme, as it could not bring in any revenue to help the barrage, but would naturally follow *after* the barrage, when it would only have to pay for itself.

In 1910 a revised project was submitted for the Rohri Canal, followed by the barrage, as the 1909 project was based on figures given by the engineers. This project was based, in accordance with the orders of Government, on figures of cultivation and revenue given by the Commissioner in Sind, in his Revenue Report dated May 10, 1910.

In 1912 the Government of India submitted the project to the Secretary of State, recommending that the barrage should be begun five or six years after the canal, so as to be completed along with it, instead of ten years after it, if needed, which I had recommended.

The Karachi Chamber of Commerce and the Indian Press have frequently complained of the delay in this great project coming to maturity, but the above brief notes show how much work and consultation has to be gone through before a project of this magnitude, estimated to cost from 5 to 10 millions sterling, can be sanctioned.

The Rohri Canal and Sukkur Barrage are likely to be followed by the great Right Bank Feeder Canal, and by improvements to the irrigation from the Nara River. These will both be dependent on the barrage. The complete scheme will probably cost about £10,000,000.

The Rohri Canal will be about 350 feet in width, and will carry a full discharge of about 16,000 cusecs, compared with 11,000 cusecs, the full discharge of the Chenab, the largest and finest canal in India.

The following statements show—

(a) The increase in estimated size and cost of the Rohri Canal.

(b) The decrease in the slope of the bed, with increase in size.

(c) The great increase in the cost of labour, which accounts for the cost per cusec being only Rs. 120 for estimate No. 2, and over Rs. 200 for Nos. 5 to 7.

No.	Year.	Proposer.	Dimensions at Head.		Slope of Canal Bed.	Full Supply.	Estimate.	
			Width.	Depth.				
1	2	3	4	5	6	7	8	9
			Feet.	Feet.		Cusecs.	Lakhs Rs.	£
1	1855	Lieutenant Fife	90	9	1 in 9,050	2,200	26	170,000
2	1858	Captain Fife	240	8	1 in 10,560	5,100	90	600,000
3	1869	Colonel Fife	267	10	1 in 12,060	7,045	200	1,300,000
4	1891	Mr. Joyner	325 428	10 10	1 in 12,670	18,700	350	2,300,000
5	1906	Mr. Summers	200	14	1 in 10,000	12,130	380	2,500,000
6	1910	Mr. Summers	330	13	1 in 16,000	14,290	469	3,100,000
7	1913	Mr. Summers	350	13	1 in 16,000	15,500	500	3,300,000

NOTE.—No. 4 includes the Jamrao Canal tract; No. 5 was a rough preliminary estimate to show that the scheme was practicable. The canal was not designed with regard to non-silting velocities, etc., as Nos. 6 and 7.

Year.	Average Daily Wage of a Coolie.	Cost of Earthwork per 1,000 Cubic Feet.	Remarks.
	Annas or Pence.	Rs.	
1855	2 to 3	1'5	From Report on Canals and Forests in Sind, by Colonel Walter Scott, dated 1853.
1898	5 to 8	5'0	
1910	7 to 9	6'0	

ALTERNATIVE SCHEMES

1. The Rohri Canal and Sukkur Barrage to be constructed together.

2. The Rohri Canal alone to be constructed first, and to be followed by the Barrage if, and when, needed.

1. The Rohri Canal and Barrage together

The Secretary of State has refused to give his sanction to the combined canal and barrage, as the estimates show

that it is practically certain that this project will not pay on the forecasts of areas and revenue given by the Revenue Department. Besides this, the final site of the barrage has not been settled yet, nor has a detailed estimate been made.

The following table gives the profits from the Rohri Canal with a barrage :

RETURNS FROM KHARIF AND RABI

Crop.	Acres.	Net Assessment per Acre.	Net Profit on Each Crop.	Total Net Profit.
KHARIF—		Rs.	Lakhs Rs.	Lakhs Rs
Rice	46,800	3'3	1'54	
Gardens	6,000	3'3	0'20	
Cotton	435,260	4'2	18'28	
Other Kharif	335,000	2'4	8'04	
	823,060		28'06	
Deduct present net Kharif revenue			8'42	
			19'64	
Add—Rents and water-power			0'90	
Sale proceeds of land			1'65	
Net profit from Kharif				22'19
RABI—				
Rabi	345,990	2'9	10'03	
Bersim	150,000	1'0	1'50	
			11'53	
Deduct present net Rabi revenue			1'62	
Net profit from Rabi				9'91
Net profit from Kharif and Rabi				32'10

The table on p. 316 gives the increase in cultivation and profits estimated by the Commissioner as due to the Rohri Canal and Barrage.

From these tables it will be seen that 71 per cent. of the profits are estimated to come from kharif, and only 29 per cent., or 11'6 lakhs, from rabi.

	Canal.	Increase in Cultivation. (1911, R., pp. cxix and cxxi.)			Profits. (R.R., p. 43.)		
		In Kharif.	In Rabi.	Total.	From Kharif.	From Rabi.	Total.
1	2	3	4	5	6	7	8.
		Acres.	Acres.	Acres.	Lakhs.	Lakhs.	Lakhs.
Nara Supply Channel Canals	Jamrao ...	—	—	—	3.78	0.93	4.71
	Mithrao ...	—	—	—	1.13	0.63	1.76
	Thar ...	108,070	11,750	119,820	0.20	0.09	0.29
	Hiral ...	—	—	—	0.02	0.25	0.27
	Khipra, etc.	—	—	—	0.25	0.25	0.50
	Total				5.38	2.15	7.53
	Sukkur ...	—	9,000	9,000	1.00	0.20	1.20
	Total				6.38	2.35	8.73
	Rohri ...	276,078	241,126	517,198	22.44	9.25	31.69
	Total	384,148	261,870	646,018	28.82	11.60	40.42

NOTE.—71 per cent. of the profits come from Kharif, and 29 per cent. from Rabi.

Now without a barrage—as there can be no deficiency of water in the flood season—the kharif crop will not be affected to any appreciable extent, and it is certain that, if the canal bed is kept low enough, almost the same rabi revenue can be obtained from the Rohri Canal without a barrage as with one.

For argument's sake, let us assume the whole 11.6 lakhs as credited to the barrage from rabi. This sum is 4 per cent. on 290 lakhs; but the lowest possible estimate for the barrage and the other works required to obtain this rabi is about 350 lakhs, and my lowest estimate is 450 lakhs.

This shows that on Mr. Lucas's forecasts the barrage cannot possibly justify itself.

The canal is estimated to irrigate 886,135 acres kharif and 376,000 acres rabi, but, as it is assumed that no profit will be derived from Jagir land, the Commissioner has allowed for revenue from 823,000 acres kharif and 346,000 acres rabi in Government land out of a culturable area of

2,132,000 acres, which gives an intensity of only 55 per cent., as compared with 85 per cent. on the Chenab.

If the rabi area were increased by 430,000 acres to 776,000, the intensity would be increased to 75 per cent., which it is almost certain to come to in time. At Mr. Lucas's net revenue per acre for rabi this would add $430,000 \times 2.9 = 12.5$ lakhs on to his forecast of 11.6 lakhs, making 24 lakhs from rabi, which would give 5 per cent. on 480 lakhs, and so might pay for a barrage.

This, however, would necessitate ignoring the revenue forecasts, which were most carefully thought out by Mr. Lucas, in consultation with his assistants and Mr. Henderson, the special Sind agricultural expert.

I understand that Mr. Lucas made his forecasts for a generation, and not for, say, fifty years ahead, when the intensity of cultivation is sure to be much increased by improved methods of cultivation.

Far more fertilizing silt will be carried on to the fields by flow canals, with their higher velocities, than by inundation canals, the low velocities in which cause the valuable silt to settle in their beds, from which it has to be removed every year at considerable cost and thrown aside.

The estimates for work can never be reduced, as the cost of labour is steadily increasing.

If the Commissioner adheres to his 346,000 acres of rabi, it will be necessary to greatly increase the rates of assessment if the scheme with the barrage is to pay.

For example, if the cotton rate is increased by Rs. 3, this will give a gross assessment of 9 and net of 6.9 (deducting 0.9 for land share and 1.2 for working expenses). This will increase the net revenue from the Rohri Canal by $435,260 \times (6.9 - 4.2) = 11.75$ lakhs, and so make the canal and barrage scheme productive.

2. Rohri Canal alone to begin with, followed by the Barrage if, and when, needed

I am certain that the canal alone will have sufficient water while cultivation is developing. It seems to me that Mr. Lucas's forecasts are admirably suited for a scheme to begin with the canal alone. It will have ample water for his full kharif area, the revenue from which alone will just pay for the canal, which is estimated to cost 500 lakhs for his total kharif area of 886,000 acres.

Of course, there will always be a large area of ordinary rabi and "bosi" rabi, which would bring in extra profit above the $4\frac{1}{2}$ per cent. from kharif.

If rabi becomes popular, or increases by pressure of population, and it is found that the barrage is required, it can be at once constructed, as the time during which the canal is being made would be occupied in making investigations in connection with the barrage, and in preparing detailed plans and a final estimate, which is likely to take four or five years.

Owing to the great head of water available at Rohri, the bed of the canal has been fixed by the levels of the ground surface, so that, even if the barrage is eventually constructed below the Sukkur gorge, only the Summers Supply Channel and the mouth portion of the canal will have to be abandoned for irrigation purposes, but they will have paid for themselves several times over before the barrage and the new mouth are ready.

The escape channel, if kept in use, would act as a safety-valve to lower the river-level in times of high flood, as it could be made to carry as much as 80,000 cusecs, which would lower the level appreciably.

The great majority of engineers who have studied this question are in favour of the proposal to begin with the canal, and several well-known experts are of opinion that the canal may be so successful that the barrage may never be required at all.

In this case, which is not an unlikely one, Sind would have a project which would compare financially even with the Chenab—the finest canal in the world—and would certainly come next to it in India.

A few opinions on these points are given in Appendix III.

OBJECTIONS TO THE ROHRI CANAL ALONE TO BEGIN WITH

From articles which have appeared lately in Indian papers, it is evident that many people think that the Sukkur Barrage Committee of 1913 have not only condemned the scheme for the canal and barrage together, as it will not be a productive work, but also my scheme for the Rohri Canal alone to begin with.

This is not the case, as shown in their Report (Appendix IV.), which has been freely quoted by Indian papers.

Everyone is agreed that the canal is an absolute necessity for the development of the Rohri Canal tract, to bring it back to what it once was, whether with or without a barrage.

If it can be shown that there is no more risk attaching to the construction of the canal alone than to similar great undertakings, such as the Suez Canal, the Panama Canal, and the Chenab itself, then Government can proceed with this great canal. This will be the first step in the greatest and best scheme remaining to be carried out in India, and I estimate that it will ultimately give an annual profit to Government of from $\frac{1}{4}$ to $\frac{1}{2}$ million sterling.

In the following notes I shall reply briefly to the objections to beginning with the Rohri Canal :

1. *Scarcity of Population*

The Rohri Canal tract is now the most thickly populated in Sind, as it has been for the last 2,000 years.

Formerly much of the tract must have been irrigated by flow when the river was on the ridge.

The present population averages about 1.25 per acre of cultivation, or $650,000 \times 1.25 = 812,000$ for the whole tract.

In the Chenab colony the area of cultivation in 1911 was 2,200,000 acres, and the population by the census of that year 1,070,000, giving one person to every two acres cultivated by flow. This gives 320 persons per square mile of flow cultivation in the Chenab colony to 800 persons per square mile in the Rohri tract, where there is much of lift cultivation.

Thus, in the Rohri tract, in which there is a large percentage of lift, over a million and a half acres could be cultivated by flow with its present population, which is engaged in the laborious process of lifting water on to their fields, at a cost estimated from Rs. 4 to 12 per acre. I think it is only right that flow water should be given to the zamindars in this tract, who are the most industrious in Sind.

2. That the Inundation Season is becoming Shorter

For many years past complaints have been made that the inundation season is becoming shorter and shorter. Our gauge readings, however, at Sukkur and Kotri do not show that this is the case.

The following table compares the average number of days in the year that the river-level at Sukkur was at or above R.L. 192 (the level proposed for the barrage gates) and R.L. 194, for thirty years ended 1877, and thirty years ended 1912:

Periods.	Number of Days at or above—	
	R.L. 192.	R.L. 194.
Thirty years—1848 to 1877	116	83
Thirty years—1883 to 1912	132	98
Average number of days' increase in thirty-five years	16	15

These figures show that the inundation season has not become shorter.

3. *Risk of Silting at Head of Canal*

The Indus and its branches contain large quantities of useless sand which is heavy, and most valuable fertilizing silt which, fortunately, is light.

The problem which the engineer has to solve is to keep the sand out of his canals, and to spread the silt on the land.

Experience gained by failures and successes shows how this can be done. Water at a high velocity carries more sediment in suspension than water at a low velocity, so that, if we can reduce the velocity of the water entering the canal mouth, we can reduce the quantity of sand entering it.

If we reduce the velocity too much, the silt will also be dropped out of it, and we shall have comparatively siltless water of less value for cultivation.

This shows the need of designing canals scientifically, so that they will carry the fertilizing silt to their tails. Where the water in the river is high enough above the land to be irrigated, and the slope of the country is steep enough, this can be done without difficulty.

These conditions exist in the case of the Rohri Canal.

Failures

Nearly all the failures have been caused by allowing deep water to enter canals at a high velocity, as it carries sand in with it, which it drops in the canal.

Even if surface water with a high velocity is taken in from the river over a high sill at the canal mouth, it carries sand in with it, which, being deposited near the mouth, reduces the canal's discharge.

Remedies

The remedies adopted by Punjab engineers, and which have had such good effect, are described in Punjab Irrigation Papers.

The more important are—

(a) To heighten the weirs generally by fixing falling

gates on their crests, so as to force water over the deposit of silt at canal mouth.

(b) To raise the sills at the canal mouths, so as to take in surface water.

(c) To widen the canal mouths, so as to reduce the velocity

FIG: 3

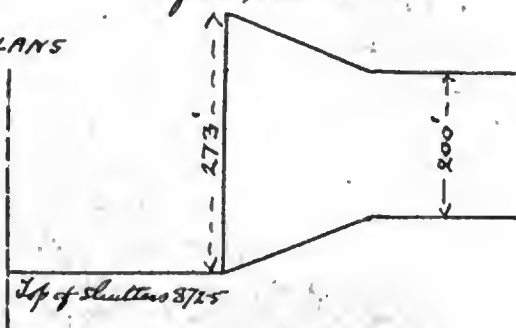
SIRHIND CANAL

Before remedies.

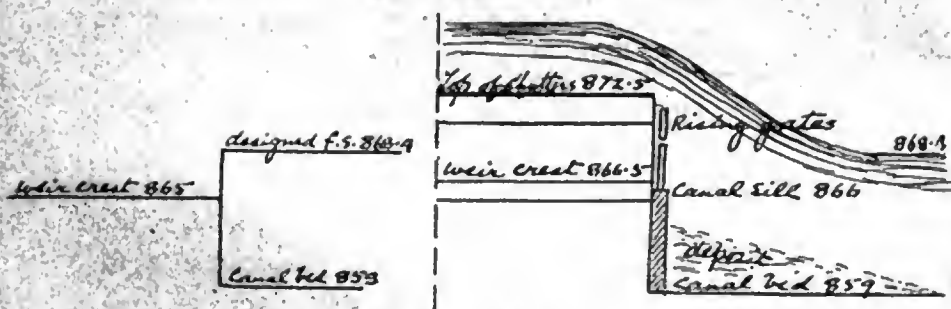


After remedies.

PLANS



SECTIONS



f.s. = full supply level

859 = height above K.M.S.L.

The rising gates are raised as the level in the river rises.

of water entering them to such an extent that it will be forced to drop its heavy sediment outside the canal mouth.

Fig. 3 shows the conditions existing at the Sirhind Canal before and after the application of these remedies, which cured the silting that had caused so much anxiety to the engineers, and loss to Government.

Fig. 4 shows the conditions proposed for the Rohri Canal.

This question of silting has been discussed during the past fifty years by almost every engineer who has been connected with this project, but I do not know of one with any Sind experience who has had doubts about constructing the canal without a barrage.

In 1871 Colonel F. H. Rundall, R.E., Inspector-General of Irrigation, referring to the proposed supply channel and escape at the head, wrote: "It appears to me that it would have been a simpler arrangement to have built the regulating sluice close on the river margin; for if that be practicable—and it would appear from the sheet of sections that a rocky foundation is available—no second set of sluices would be required, and there could not possibly be any silting."

In 1910 Sir John Benton, K.C.I.E., Inspector-General of Irrigation, referring to the supply channel and escape, wrote: "The escape will act as undersluices at the head of the Left Bank (Rohri) Canal, and will serve to admit of top water being procured, so that head silting in the Left Bank Canal need not be apprehended."

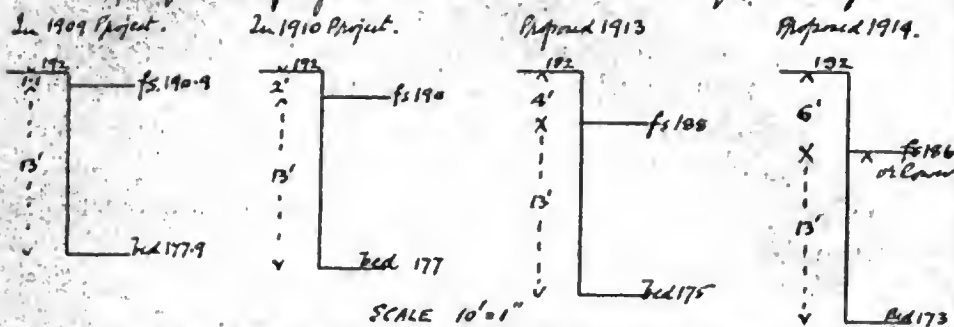
In 1911 Mr. R. G. Kennedy, C.I.E., the well-known Punjab hydraulic expert, wrote: "If you design the supply channel properly, with its escape back to the river, it could be used as a silt-trap, scoured out occasionally into the river, very much in the same way as they use undersluices and the divide wall on most new canals, especially on the Sirhind Canal (Punjab), where they have silt troubles, or, rather, *had* them before this system was introduced. With this possibility in view, it would be more than a mistake to make the barrage first."

In Sind we have the new mouth of the Fuleli Canal, which was excavated in 1856, and has worked satisfactorily ever since.

This canal has a slope of only 1 in 19,000, and takes in water direct from the Indus when it is at its highest level, and carrying much sand and silt. There are no arrangements for taking surface water over a high sill, as in the

Fig 4.

Top of barrage gates or shutters at RL 192 for all designs.



Allowance from top of barrage shutter to full supply level (designed)

Punjab Canals.
(Actual)

Chenab 3.5'

Sirhind 4.1'

Lower Jhelum 5.5'

Rohri Canal.

(Proposed)

In 1909 1.1'

" 1910 2.0'

" 1913 4.0'

" 1914 6.0' or more.

NOTES.—(a) Besides the above remedies, divide walls are constructed at right angles to the weirs, so that water can be ponded up—as it is now ponded up at Sukkur by the gorge—to make it drop its silt.

(b) As the top of the Rohri Canal shutters cannot be raised, on account of the great danger of forcing the river to change its course and leave the gorge, it will be better, with or without a barrage, to lower the bed of the canal, which can be done to any extent at comparatively small cost.

(c) I have proposed 175 for the bed, but think it should be even lower, so as to allow 5 or 6 feet from f.s. level to top of shutters.

(d) The lower the bed at head, the greater the fall into the canal, and the greater the horse-power available for the development of electric power, which will be used for working cotton and flour mills, irrigation from wells, lighting Sukkur, Rohri, and other towns, lifting water to the Sukkur water-supply reservoirs, and many other purposes.

(e) The width of the Chenab Canal is 234 feet, but its mouth is 416 feet, which allows of surface water being taken in at a safe velocity.

(f) The Chenab has its tops of shutters at 728.2, and f.s. at 724.7, which gives a difference of 3.5, but it is probable that this will be found to be insufficient.

(g) The allowance for the Lower Jhelum is 5.5 feet, which, I believe, works very satisfactorily.

Punjab, and the head sluice is half a mile from the river ; but, with all these apparent disadvantages, it has never silted since an escape was opened from its tail to the sea in 1900.

Before that time it silted a little at its tail, where there was practically a "dead end." The Nara Supply Channel at Rohri has been given as an example of silting, but it is hardly fair to take it, as its head sluice is fully half a mile from the river, and its mouth is also at some distance from the main channel.

Even with these inducements to silting, it worked well and gave a good supply for fifty years (1856-1906), till floods from river spills actually flowed across it, washing away both its banks, which naturally silted it. Besides this, the Nara River, which it feeds, is in a very bad state. It winds about through the desert like the Indus. Thousands of snags, many 4 to 5 feet in diameter, are usually lying in its bed, and sand-hills 20 to 30 feet in height occasionally fall into it.

I hear that it has recovered, and that last year's revenue on it was a record.

If it is accepted that there is no likelihood of the Indus volume falling to any injurious extent, no greater error could be made than to construct a barrage costing 2 or 3 millions sterling on the chance of its preventing a problematical silting of the canal.

If fall in volume and silting are not feared, Government can construct the Rohri Canal at once, and in three or four years begin to open 3,000,000 acres of the best land in Sind for the development of cotton.

If the large majority of engineers who do not fear silting are right, Government, by postponing the barrage, will save many millions sterling.

Even if the chance of our being correct were only 1 in 10, I should say, Make the canal to start with ; but from long experience of canals in Sind, I think the chance of success is even more than 10 to 1

I have gone more fully into this question than I intended, but on it seems to depend the question of saving some 5 millions sterling or more, and the future of new irrigation works in Sind.

Danger in Further Delay

If the construction of the canal is postponed again, there are two alternatives :

(a) To let this tract remain undeveloped, and to lose a great cotton crop of 4 millions sterling or upwards.

(b) To make new inundation canals and improve existing ones. This alternative would probably be followed, but would endanger the scheme's ever becoming productive, as most of the expenditure incurred on these low-level canals would be lost when the Rohri Canal is made—and it must be made sooner or later—but the net revenue derived from them would have to be deducted from the net revenue due to the Rohri Canal, in addition to the present net revenue of 10 lakhs.

The greater the net revenue from new works other than the Rohri Canal, the less chance would there be of the scheme being productive.

The Right Bank Canal tract is already burdened by a net revenue of 15 lakhs, which, if derived from an uncultivated tract, would return 5 per cent. on an expenditure of 300 lakhs.

These figures show how Sind is handicapped by its old cultivation compared with the Punjab, where many of the new canals were constructed in waste land.

They also show the great urgency of making a beginning before the old revenue becomes too great a burden for any scheme to bear.

The soil of the Indus valley is good, but it only supports one-fifth of the population per square mile, supported by the Ganges valley. Mr. Gait, C.S.I., C.I.E., in his recent interesting lecture before the Royal Society of Arts on the census of 1911, put this great difference down to the difference in

rainfall, which is good in the Ganges valley and very scanty in the Indus valley. By making use of the Indus silty water, Sind could soon make up for the want of rain, and perennial canals are a far more reliable source of supply than the best rainfall.

THREE PICTURES OF THE ROHRI CANAL TRACT

500 B.C.

The Indus flowing along the centre of the tract. A high state of civilization and a contented peasantry. Large cities with houses of burnt brick. Large, straight canals and branch canals flowing along ridges. Suddenly the Indus leaves this ridge, drifting sand fills up the canals, and the population, being without water, leave the country, leaving a thousand villages and towns desolate.

A.D. 1914

Indus twenty to thirty miles away from the tract. Canals flowing in lowest ground. Only one-fourth of the area cultivated. Ridges left uncultivated. Cultivators lifting comparatively siltless water on to their fields from 5 feet to 20 feet at a cost of, say, Rs. 5 per acre or more. A population of 800,000 persons cultivating 600,000 acres, which with high-level flow canals could be cultivated by 300,000 persons.

Then, if the Rohri Canal is constructed

A.D. 1940,

over a million acres of cultivation, half to three-quarters of a million acres of cotton, and twenty to thirty cotton mills. Straight, high-level canals carrying silty water to the fields. Electric power generated at canal head, working cotton mills, lighting Sukkur, Rohri, and Khairpur, and other towns by electricity, and lifting water for the Sukkur supply, etc. Cultivation gradually increasing from 1 to 2 million acres. Profit to Government of one-quarter to one-half million sterling per annum.

CONCLUSION

The estimates—based on the Commissioner's forecasts of revenue—show that the Rohri Canal and Barrage, if constructed together, cannot be a remunerative work.

The Rohri Canal alone, to begin with, will be a remunerative work, based on the Commissioner's kharif forecasts and a small area of bosi rabi grown on kharif water.

The canal and barrage together will be productive—

A. If the annual assessment on cotton is increased from the Commissioner's rate of Rs. 6 per acre to Rs. 9. Or

B. If the area of rabi in Government land is increased by, say, 430,000 acres—from the Commissioner's 346,000 acres—to 776,000 acres.

The canal alone, while cultivation is developing, will pay with cotton even at Rs. 5.

The quantity of water for the cotton crop will be the same with or without a barrage.

I have no doubt that cotton could stand an assessment of Rs. 9, but think that such a rise from the present rate of Rs. 3 to Rs. 4 could only be made very gradually.

The tract of 5,000 square miles between Rohri and Hyderabad lies so high that it can only get water by flow from a canal such as the Rohri Canal.

Sukkur is an ideal site for such a canal for the following reasons :

(a) The rock bar, which extends across the river from bank to bank, forms a natural weir.

(b) The river is ponded up by the gorge, so that surface water, which contains less sand, can be taken into the canal at a low velocity.

(c) The water-level in the river is so high above the land to be irrigated, that the supply at all seasons can be "dropped" into the canal.

(d) The Indus has a practically unlimited supply of water all the year round. In the rabi season, the canal only requires about 6,000 out of 50,000 available.

(e) Judging from what has happened in the past, the river's discharge will not be affected to any appreciable extent by new Punjab canals, nor even by a weir across the river itself.

If it is accepted that the Rohri Canal will receive a sufficient supply in the kharif season—and I can see no reason to doubt this—the canal alone may safely be made to begin with. There are risks, of course, as in nearly all great schemes, but the risks in this case are very small indeed.

It was said that the Suez Canal would silt as soon as opened, and had Lesseps not taken any risks, this magnificent work might never have been made.

There were risks in making a new mouth, four miles above Kotri, to the Fuleli—the largest canal in India—from a silty river, without any precautions against admitting silt, but at all seasons it has worked satisfactorily for fifty years without any barrage.

If the Rohri Canal works without the barrage for even ten years, the saving will be over a million sterling, and if for forty years, which is not improbable, I estimate the saving at more than five millions!

If the great majority of engineers, who believe that the canal will work alone while cultivation is developing, prove to be wrong, the barrage can be built at any time.

The bed of the canal, except a few miles at its head, will be the same with or without a barrage, so that even if a site is finally settled below the gorge, only the mouth portion of the canal will have to be "scrapped."

In my opinion it would be a grave error to make this costly barrage until it is seen that it is required.

The people have no rabi to speak of at present, so will have no grievance, and for some years will be fully occupied with their increased kharif crops.

A minor reason for postponing the barrage is that if constructed at the same time as new Delhi, rates will be raised, owing to competition, as many of our Sind

masons come from the Punjab, which will also supply masons for Delhi.

Engineers, like doctors, differ, but there is a large majority in favour of beginning with the canal.

I would not continue to urge the canal first, did I not feel so convinced that it is the best scheme, and as the Earl of Wemyss replied when asked to explain the secret of his old age: "The only thing to do at ninety, or before it, is to keep on fighting for what one believes to be right. That is the main thing."

The question to be decided is, under the circumstances described in this paper, Would Government be justified in constructing the Rohri Canal, which must be constructed sooner or later, to begin with?

The alternative is to wait and see the result of further Punjaub withdrawals and investigations in connection with the different sites proposed for the barrage. This would mean postponing the development of Sind for at least five years, and probably for very much longer.

APPENDIX I

LETTER TO THE "TIMES" OF OCTOBER 8, 1913

SIND IRRIGATION—ROHRI CANAL AND SUKKUR BARRAGE

To the Editor of the "Times"

SIR,

It would seem that in India a widespread fear has been gaining ground that, owing to withdrawals of water from the Indus above Sind by new Punjab and other canals, we may see the Indus laid dry and Sind ruined for want of water. As I have been in Sind for about twenty years, and am responsible for the present project for the Rohri Canal followed by the Sukkur Barrage, I wish to show how these fears arose, and also that—fortunately for Sind's future—the data which we have on record indicate that they are quite groundless, and that the volume of water in the Indus is not decreasing, but, if anything, increasing. This is a matter of the utmost importance and urgency for Sind, and on it the question as to whether 2 to 3 millions sterling should be expended on a barrage at Sukkur within a few years is likely to depend.

When the Indian Irrigation Commission of 1901-1903, under Sir Colin Scott-Moncrieff, came to Sind, the Sind engineers gave evidence that the Punjab withdrawals had not affected Sind to any extent. I differed from them, and pointed out to the Bombay Government that weirs across the Indus would probably be required. During the last twelve years, however, careful measurements of the Indus discharge have been made, which show that the Sind engineers were right, and that there is no need to be afraid of Sind being ruined for want of water.

DISCHARGE OF THE INDUS IN SIND

As the discharge of the Indus in Sind, in the inundation season (April to September), is practically unlimited (only about 15 per cent. being utilized), only the cold weather (rabi) season discharge at Sukkur, from October to March, need be considered. The average rabi season discharge accepted some years ago was 39,000 cusecs, but regular measurements give the average as 52,000 cusecs for the last twelve years. The following figures give the discharge for groups of four consecutive years : ended 1904-05, 43,000 cusecs; 1908-09, 52,000 cusecs; and 1912-13, 61,000 cusecs. These figures are very satisfactory, especially when it is taken into consideration that the withdrawals by Punjab canals in the rabi season have not been decreasing. As Sir John Benton pointed out in his recent lecture before the Royal Society of Arts, irrigation in Sind has increased by 48 per cent. in twenty-five years. Judging by what has happened in the past, the abstraction of another 10,000 or 15,000 cusecs will not affect Sind to any appreciable extent, if at all.

RETURN SEEPAGE

It is natural to expect that the volume in the Indus, when it reaches Sind, would be considerably reduced by the abstraction of such large quantities of water, and anyone who has not studied the effect of return seepage from irrigated tracts in other countries or in Sind can hardly credit its great importance. Even in America, where systematic investigations are carried on, the great effect of seepage was not fully realized till some fifteen years ago; but now it is allowed for, while apportioning the area to be cultivated by any water channel.

It is a well-known fact that rivers and lakes are kept supplied from the subsoil water in the surrounding country, and that a large proportion of the water used for irrigation finds its way back to rivers; but the immense quantity returned to the Indus, which is of vital importance to Sind and is sufficient to irrigate some millions

of acres, has hardly been realized. During the flood season the Punjab canals abstract an average of over 40,000 cusecs, or as much as the discharge of the Thames, from the Indus and its tributaries, and 20,000 cusecs in the low-water (rabi) season. A large proportion of this water, which with the rainfall, if spread over an area of 10,000 square miles, would cover it to a depth of about 5 feet, soaks into the ground, where it forms immense underground reservoirs, which are not subject to such losses by evaporation as reservoirs above-ground. These underground reservoirs—the level in which rises about a foot every year in perennially irrigated tracts—in their turn give back water to the rivers in the cold season, when they fall low. Thus the Punjab canals, by storing up water in the flood season, when it cannot be used, and giving it back in the cold season, when it is wanted, equalize the flow in the Indus.

THE RIVAL PLANS

Owing to the rocky gorge at its head, and to the steep fall of the country, which necessitates its water-level being dropped about 8 feet before it reaches the land to be irrigated, there can be no difficulty in giving the Rohri Canal a sufficient supply to irrigate about $1\frac{1}{4}$ million acres, estimated to be irrigated annually, out of its total area of 3 million acres. When the present backward methods of cultivation have improved, and the population has increased, the irrigated area will probably be increased by $\frac{1}{2}$ million acres, the additional revenue from which would pay for the barrage. Sind revenue and agricultural experts do not anticipate that this additional area will come for a generation at least, but if it does, so much the better for Sind.

The Rohri Canal and the barrage together are estimated to give a return of under $4\frac{1}{2}$ per cent., which leaves a very slight margin for errors. As Sir James Wilson hinted in the discussion on Sir John Benton's lecture, the Government of India want schemes to show a return of 6 to 8 per cent. The Rohri Canal alone can hardly fail to give a

return of 7 per cent. while cultivation is developing, or a net annual profit of about £100,000. If the canal works alone for even twenty or thirty years, as anticipated by its originator (Colonel Fife), Mr. Joyner, and many other engineers besides myself, the project will compare favourably with some of the best of the Punjab canals. The Rohri Canal will have a practically unlimited source of supply, as it requires only about 6,000 cusecs for its $\frac{1}{2}$ million acres (rabi) out of the 50,000 in the Indus; while the Punjab Triple Project Canals depend for their supply upon an average discharge of 10,000 cusecs in the Jhelum, which has to irrigate over a million acres.

The Assuan Dam stores up water towards the end of the flood season in an immense lake, and lets it out as required when the Nile level falls, and Sir Louis Dane's proposed Woolar Lake Reservoir, which may soon be required, will do the same for the Jhelum River, which will supply the Punjab Triple Canals. The Sukkur Barrage, however, will not store water, but will only raise the river-level at Sukkur when it falls too low to give sufficient water to canals just above it, and so will not increase the supply in existing inundation canals, as some people suppose. Eventually, when the irrigation on the Rohri Canal is developed, the barrage may be made to increase it, and to feed the proposed great canal from Sukkur on the right bank of the Indus. The project may then give a net annual profit of as much as £250,000.

COTTON-GROWING

Another reason for constructing the Rohri Canal at once is that it will, without the barrage, give flow irrigation to the best cotton land in Sind, and is likely to make a substantial addition of upwards of £4,000,000 per annum—one expert estimated £12,000,000—to the value of the Indian cotton crop, which Sir Charles Macara has stated is expected to be £50,000,000 this year. Thus the value of one year's cotton crop on the Rohri Canal is estimated at more than the total cost of the canal, and the revenue from its cotton and hot-weather food-crops alone would

make it a productive work, all net revenue from cold-weather crops coming in as extra profit.

SUMMARY OF CONCLUSIONS

To sum up, if the discharge in the Indus does not fall by a large amount, which all the data we have show that it will not do, the Rohri Canal alone will have ample water for a generation at any rate, while cultivation is developing. The canal alone will give a net annual profit which I estimate at over £100,000, and some millions sterling will be saved in interest charges, which would accumulate if the barrage is constructed along with the canal, as it would be like a 50 horse-power engine doing the work of 20 horse-power while cultivation is developing. On the other hand, should Sir John Benton's anticipations turn out to be correct, which will be known before the canal is completed, the barrage can be commenced at any time, the interval till its commencement being used for making the necessary investigations required before a final estimate can be prepared for it.

Nine years' continuous work in connection with this project has convinced me that the only project which is financially safe is to make the Rohri Canal alone to begin with, and to follow it up by the barrage when needed. The proposal to construct the canal before the barrage is entirely in accordance with the views of the Indian Irrigation Commission of 1901-1903, and all Sind officers, both revenue and public works, as far as I am aware, are in favour of making a start with the Rohri Canal first.

FUTURE IRRIGATION WORKS

In an article which appeared in the *Times* on May 21, it was stated that "if the present rate of progress is continued, and sufficient funds remain available, the Indian Irrigation Department will have exhausted most possibilities of construction in another twenty years." This cannot be taken as applying to Sind, where scientific irrigation has hardly made a start. The large works contemplated, in Sind

alone, are likely to cost about £20,000,000, and to take forty to fifty years to complete. The success of the Rohri Canal will make it the forerunner of other schemes.

I am, sir, yours obediently,

THOS. SUMMERS.

(Late Chief Engineer in Sind.)

Woodside, Peebles,

October 6, 1913.

APPENDIX II

EXTRACTS FROM REPORT ON THE ROHRI CANAL AND SUKKUR BARRAGE PROJECT (1913)

COTTON ON ROHRI CANAL—SINDHI OR AMERICAN COTTON

Annual out-turn, from 350,000 to 600,000 bales; annual value,
from £4,000,000 to £6,000,000.

THE Rohri Canal tract is specially suited for the growth of cotton, and even now, with a scanty water-supply, which is usually available for only three to five months, it produces some of the best cotton in Sind, and fully twice as much per acre as the Punjab, Central Provinces, Hyderabad, Deccan, and the whole of India.

The Commissioner in Sind, in his Revenue Report, estimates that 470,000 acres of cotton will be grown on the Rohri Canal tract with present Sindhi methods.

QUANTITY PER ACRE

American cotton grown at Nawabshah, in the centre of the Rohri Canal tract, last season produced an average of 900 pounds of seed cotton.

VALUE OF SEED COTTON PER MAUND (80 POUNDS)

In the Commissioner in Sind's Revenue Administration Report for 1910-11, it is stated that cotton grown on the Jamrao Canal, which is the only modern perennial canal in Sind, fetched Rs. 12 per maund (80 pounds). As the Rohri tract has a railway running through it, has better soil and will have more silt in its water than the Jamrao, it may be assumed that this rate of Rs. 12 will be obtained for the Rohri Canal cotton.

VALUE OF COTTON ON ROHRI CANAL (PER ACRE)

The value of Sindhi cotton per acre, according to these figures, will be $\frac{900 \times 12}{80} = \text{Rs. } 135 (\text{£}9)$.

VALUE OF COTTON ON ROHRI CANAL

The culturable area taken for this project is 2,314,000 acres, and out of this the Commissioner has allowed for 470,000 acres of cotton, or only 20 per cent., which, when the excellent quality of the soil and climate for cotton-growing, and the ample supply of water, are considered, is to me a very safe estimate.

American Cotton.—Mr. Henderson—800 pounds per acre at 20 per cent. higher price than Sindhi cotton, which comes to a little more than for Sindhi.

The Commissioner's Revenue Report is based on Sindhi cotton, and these figures show the great probability of a very large addition being made to British-grown cotton. This is one of the reasons why the canal should be constructed at once. As soon as the first section is opened, in four or five years, a block of a million acres in area, with an unlimited water-supply, will be ready for most valuable experiments in growing cotton of all descriptions, as well as rabi. This will show clearly if the barrage is required at once or can be postponed.

The figures given below show how the Rohri Canal without a barrage could pay its way, by cotton alone, with the Revenue Report rice and gardens and other kharif to make up 823,060 acres kharif, but without any rabi, except the 100,000 acres now on it. Of course, there would always be a large area of "bosi" and of rabi on wells, as there are thousands of wells now used for irrigation, the water-level in which will be raised considerably when the new canals are opened.

EGYPTIAN COTTON

If Egyptian cotton succeeds well, the annual out-turn has been estimated at 800,000 acres, and annual value at £12,000,000.

Mr. Fletcher, when Deputy Director of Agriculture in Sind, in 1904, estimated that 800,000 acres of Egyptian cotton could be grown annually in this tract at a value of Rs. 225 (£15) per acre, "if the fibre is the same quality as in Egypt." This would give the value of cotton on the canal as £12,000,000.

It has been found that Egyptian cotton has not succeeded on a large scale, and it has not been allowed for by the Commissioner; but it may succeed on the Rohri Canal, where the soil is equal to the best soil in the world, with the exception of Egypt.

I give below some estimates of the value of Sindhi cotton which is likely to be grown, on the basis of 900 pounds per acre and Rs. 12 per maund.

		Acres.	Value per Acre.		Value of Crop on Canal.	
			Rs.		Lakhs Rs.	£
Sindhi cotton	Mr. W. H. Lucas	470,000	135	9	644	4,230,000
	Dr. Summers	700,000	135	9	945	6,300,000

Crop.	Area.	Gross Assessment per Acre.	Deduct—		Net Assessment per Acre.	Net Revenue from Each Item.	Return on Rohri Canal (450 Lakhs).	Remarks.
			Land Share, One-tenth.	Working Expenses.				
Cotton	600,000	Rs. 6'0	Rs. 0'6	Rs. 1'2	Rs. 4'2	Lakhs Rs. 25'2		In Egypt, when a block of land is changed from basin (flood) irrigation to canal (perennial) irrigation, about 80 to 90 per cent. of it is usually cultivated with cotton for several years, and it is almost a certainty that 600,000 acres, or only 28 per cent. of the culturable area, will be under cotton when the Rohri Canal is opened.
Rice and gardens	52,800	5'0	0'5	1'2	3'3	1'7		
Other kharif ...	170,260	4'0	0'4	1'2	2'4	4'1		
Rents and land*	—	—	—	—	—	2'5		
823,060						33'5		
Deduct present net kharif revenue			...	...	...	8'4	
Net profit from kharif			...	...	...	25'1	5'6
Add for increase of land from Rs. 10 to Rs. 50 per acre			...	...	...	6'6	
Net profit from kharif			...	...	...	31'7	7'0

* The Revenue Department have estimated only Rs. 10 (13s.) per acre as the sale price of 460,000 acres of unoccupied land after the canal is opened, which gives annually a net revenue of—

$$\frac{4}{100} \times \frac{9}{10} \times 460,000 \times \text{Rs. } 10 \quad \dots \quad = 1'6 \text{ lakhs.}$$

$$\text{Add allowance for rents and water-power} \quad \dots \quad = 0'9 \text{ lakhs.}$$

$$\text{Total} \quad \dots \quad \dots \quad \dots \quad = 2'5 \text{ lakhs.}$$

This table shows that—

(1) With the Revenue Report rates and land at only Rs. 10 per acre, the return with 600,000 acres cotton would be 5'6 per cent.

(2) With Chief Engineer's rate of Rs. 50 for land, the return would be 7'0 per cent.

(3) That there should be no difficulty whatever in the canal paying by itself until the barrage is constructed, as there is no question of deficiency of water for Sindhi and American cotton, on which the project is based.

APPENDIX III

OPINIONS IN FAVOUR OF COMMENCING THE ROHRI
CANAL BEFORE THE BARRAGE

(IN ORDER OF DATES)

MR. F. G. PRATT, Collector of Hyderabad (Sind)
(February 19, 1909) :

"I agree with Dr. Summers' view that the Sukkur Barrage—so far, at any rate, as the Left Bank is concerned—is a problem not of the present, but of the future generations."

MR. T. B. ROBERTSON, Superintending Engineer (Sind)
(January 4, 1910) :

"The day has not come yet for this great scheme. We will run a terrible risk of a great failure financially with the dam—as far as we can see no risk with the Rohri Canal—and can push on or hold back according to growth of cultivation and its quality."

SIR JOHN BENTON, K.C.S.I., Inspector-General of Irrigation
(March 5, 1910) :

"I may here explain that the feasibility of operating the Left Bank (Rohri) Canal for a certain number of years without a barrage can be decided in a short period; if the supply channel is completed in two or three years we can proceed to operate it at once, and if it does not silt we will have the requisite assurance that the construction of the barrage can be put off for the five or six years proposed by Dr. Summers; if the channel does silt the barrage can be put in hand at once, and the two or three years' delay will not be of material importance.

"The escape will act as undersluices at the head of the Left Bank (Rohri) Canal, and will serve to admit of top water being procured, so that head silting in the Left Bank Canal need not be apprehended."

SIR THOMAS HIGHAM, K.C.I.E. (May 5, 1910).

"I may say that the idea of constructing and completing the Rohri Canal without a weir, leaving the weir to be constructed later if then found to be necessary, is entirely in accordance with the views of the Irrigation Commission, provided, of course, there is reasonable ground for supposing that the canal can be worked perennially without a weir, although, perhaps, not to such full advantage as if a weir were made. All the reasons you give for this are irrefutable, and the only argument that I can suggest on the other side is that, if the canal is constructed before the weir is undertaken, there are very considerable chances that the weir may never be built at all, which would be a disappointment to the advocates of heroic measures.'

SIR THOMAS HIGHAM, K.C.I.E. (June 24, 1910):

"I think you have made out a strong case for deferring the actual construction of the weir until the Rohri Canal has been completed on the lines proposed by you."

W. L. CAMERON, C.S.I., Secretary to Government of Bombay, P.W.D. (August 2, 1910):

"Labour is limited, and it is important that the canal, or some portion of it, should be opened with the least possible delay; interest charges mount up very rapidly, and the sooner you begin to get a return for your money the better."

COLONEL SIR JOHN OTTLEY, K.C.I.E. (August 3, 1910):

"I have absolutely no doubt whatever that you are correct in urging that the Rohri Canal should be the first step, and *not* the barrage."

MR. A. D. YOUNGHUSBAND, C.S.I., Commissioner in Sind (October 3, 1910):

"Dr. Summers appears to have made out an excellent *prima facie* case for his contention that the tentative and gradual construction, on the lines indicated by him, of the Rohri Canal, can quite safely be taken in hand

in advance of the barrage. Unless this case can be rebutted, it would certainly appear that both economical and other considerations point to the order of construction advocated by him."

MR. R. B. JOYNER, C.I.E., Superintending Engineer in Sind (December 26, 1910):

"If the Rohri Canal when made can be adapted to utilize the barrage, it would seem natural to start with that."

MR. R. G. KENNEDY, C.I.E., Chief Engineer, Punjab (February 6, 1911):

"I agree with your idea of making the Rohri Canal first, and, if needed, the barrage afterwards. It seems to me that quite probably the barrage might never be needed, as, if you design your supply channel properly, with its escape back to the river, it could be used as a silt-trap, scoured out occasionally into the river."

MR. W. L. STRANGE, Chief Engineer in Sind (November 5, 1911):

"As long as the Rohri Canal can meet the demands of irrigation the barrage will be an unnecessary expense, and the interest charges will mount up."

SIR COLIN SCOTT-MONCRIEFF, K.C.S.I. (January 11, 1912):

"Go ahead with your canals, and get them into working order as inundation canals. Be studying the dam question all the time. Never let the Irrigation Department allow Government to take for granted that a dam will not be wanted. *It will be wanted* if Sind is to be the Garden of India that I hope for. It won't be in my time, but it may be in yours."

(June 20, 1913)

"My opinion of the question of weir first versus canal first I can give in very few words. Without hesitation I say, Make the Rohri Canal first. This seems to me so evident that it is like flogging a dead horse."

APPENDIX IV

EXTRACT FROM THE REPORT OF THE SUKKUR
BARRAGE COMMITTEE, 1913

Paragraph 32.—Indeed, from the remunerative aspect, it is possible that the only hope would lie in the direction of a scheme for a canal followed by a barrage as a definite project.

In addition to the proposal for a Rohri Canal without a barrage, or without a barrage for an indefinite time, a question with which the Committee have dealt in Paragraphs 23 to 28 of this report, Dr. Summers has suggested the construction of the barrage after the first and second sections of the canal have been completed and opened for irrigation. There is something to be said for this idea. It would mean that the canal would commence to earn revenue at a comparatively early date, and so reduce the burden of the interest debt. There would also be less risk of failure of supply, as without the help of the barrage water would only be required for the areas pertaining to the first and second sections, and the barrage would be completed before the third and largest section came into operation, but it would be attended with some risks; and in the absence of very carefully prepared forecasts of revenue and expenditure, accepted by the authorities in India, the Committee are unable to give it the necessary critical examination, and mention it only as a suggestion which has come before them.

APPENDIX V

FINANCIAL NOTE ON THE TWO PROJECTS—NET PROFITS DUE TO ROHRI CANAL AND BARRAGE

As shown on p. 315, the Commissioner has estimated that an additional area of 108,070 acres of *kharif* will be cultivated on the canals supplied by the Nara River, and that a net profit of Rs. 40·4 lakhs will result from the construction of the canal and barrage.

After deducting 2·5 lakhs for maintenance of the barrage, this leaves a net profit of Rs. 38 lakhs as due to the canal and barrage (including widening the Nara Supply Channel), as under :

Canal.	Net Profits.			Remarks.
	From Kharif.	From Rabi.	Total.	
	Lakhs Rs.	Lakhs Rs.	Lakhs Rs.	
(a) Rohri ...	22·4	9·3	31·7	Mainly from changing lift cultivation into flow, and substituting cotton for less valuable crops.
(b) Nara River	5·4	2·1	7·5	Mainly due to an increase of 50 to 60 per cent. in assessment on cotton, which is now cultivated by flow.
(c) Sukkur ...	1·0	0·2	1·2	Due to an increase of 50 per cent. in assessment on rice, which is now cultivated by flow, and gets an average of 1 cusec of full supply for every 20 acres.
Total ...	...	...	40·4	
Deduct for maintenance of barrage ...	...	...	2·5	
Net profit ...	...	...	38	

ESTIMATED COST OF WORKS

The estimates for the work necessary to give this 38 lakhs, taken by the Government of India, are—

		Lakhs Rs.	
Robri Canal ...	...	483	To carry a full discharge of 14,300 cusecs.
Barrage ...	...	266	
Widening Nara Supply Channel		33	
Total ...	...	782	

The Commissioner's estimate of 7.5 lakhs from the Nara Canals, as shown on page 19, is based on an increased *kharif* area of 108,070 acres, and on increases in assessments on *kharif* crops of 30 to 60 per cent.

No allowance, however, is made in the estimate of 782 lakhs for the works which are absolutely necessary to enable the canals to carry the extra water required for this additional cultivation; nor for the embankments necessary to protect the Nara River and the Eastern Nara tracts from floods, which come periodically from above Rohri, through the sandy desert to the west of Sind (see Map).

Rough estimates have been made for some of these works, such as 29 lakhs for flood embankments to protect the Eastern Nara irrigation, and 25 lakhs for enlarging the Mithrao Canal. Besides these, a large sum will be required for keeping floods out of the Nara Supply Channel and the Nara River.

After going into the question, I am of opinion that no appreciable profit will be available from the Nara River Canals to assist the barrage, over and above that required to pay the interest on their own new works.

With regard to the Sukkur Canal, the profit is almost entirely due to an increase of 50 per cent. in the assessment on rice. The supply to this canal will not be increased by the barrage, but may be considerably decreased, unless a new mouth is made to it in place of the present mouth, which will be masked by the Bell's bund (G), as shown on

enlarged map. Any extra revenue from this canal will not pay for its new mouth, so that nothing should be credited to the barrage from it.

It comes to this, that, owing mainly to the Right bank, the Sukkur Canal and Nara River tracts getting flow water at present, there is no chance of their bringing in any appreciable profits to pay for a barrage under present conditions.

The Rohri Canal must pay for the barrage, and this can only be done now by a large increase in the Commissioner's forecasts of revenue, or by waiting till rabi becomes popular, or pressure of population produces more intensive cultivation.

As I have shown in my reports, my rough estimates for the canal and barrage are—

		Lakhs Rs.	
Rohri Canal	...	500	To carry a full discharge of 15,500 cusecs required for the Commissioner's 886,135 acres of kharif.
Barrage (350 to 450 lakhs)	say	400	
Total	...	900	

To pay interest on this at 4 per cent. a net revenue of Rs. 36 lakhs is required; but on the Commissioner's net revenue (p. 315) of only Rs. 32 lakhs, or Rs. 29½ lakhs, after deducting for maintenance of barrage, the scheme cannot be remunerative.

If we include interest during construction of, say, 80 lakhs on the barrage, which can earn no revenue till it is completed, the total estimate will be 980 lakhs. This would require a net revenue of 39 lakhs to make it productive.

FORECASTS WHICH WOULD PAY FOR THE BARRAGE

If we ignore the revenue forecasts, which no Sind officer has proposed to do, the following sample estimates show how the canal and barrage together might be a productive work [see p. 328, *A* and *B*]:

CANAL AND BARRAGE

A

B

Crop.	Acres.	Net Assessment per Acre.		Net Profit on Each Crop.	Total Net Profit.	Acres.	Net Assessment per Acre.		Net Profit on Each Crop.	Total Net Profit.
		Rs.	Lakhs Rs.				Rs.	Lakhs Rs.		
KHARIF—					Lakhs Rs.				Lakhs Rs.	Lakhs Rs.
Rice ...	46,800	3.3	1.5			46,800	3.3	1.5		
Gardens ...	6,000	3.3	0.2			6,000	3.3	0.2		
Cotton ...	435,260	6.9	30.0			435,260	4.2	18.3		
Other kharif ..	335,000	2.4	8.0			335,000	2.4	8.0		
Deduct present net kharif revenue	823,060	...	40.7			823,060	...	28.0		
	...	...	8.4			...	...	8.4		
Add—Rents and water-power	...	...	32.3			...	...	19.6		
Sale proceeds of land ...	...	...	0.9			...	...	0.9		
Net profit from kharif	...	...	1.7			...	...	1.7		
	...	...	...		34.9	...	...	...		22.2
RABI—										
Rabi ...	345,990	2.9	10.0			345,990	2.9	22.5		
Bersim ...	150,000	1.0	1.5			150,000	1.0	1.5		
Deduct present net rabi revenue	345,990	...	11.5			345,990	...	24.0		
	...	...	1.6			...	...	1.6		
Net profit from rabi ...	...	...	...		9.9	...	...	...		22.4
Net profit from kharif and rabi	...	...	...			...	...	...
Deduct for maintenance of barrage	...	...	...		44.8	...	...	...		44.6
Net profit from kharif and rabi	...	...	...		2.5	...	...	...		2.5
	...	...	...		42.3	...	...	...		42.1
Return = 4.7 per cent. on 900 lakhs. Total cultivation, 1,169,050 acres. Intensity = 55 per cent. of cultivable area.										
Return = 4.7 per cent. on 900 lakhs. Total cultivation, 1,599,050 acres. Intensity = 75 per cent. of cultivable area.										

NOTES.—1. If the sale price of land is increased from Rs. 10 to Rs. 30 per acre, the returns will be increased to 5.1 per cent.

2. For calculation of net assessments and sale proceeds of land, see p. 339.

3. Water has to be provided for 886,135 acres kharif, but the net revenues are calculated only on 823,060 acres kharif and 345,990 acres rabi, as it is assumed that no profit will come from jagir lands.

NET REVENUES FROM ROHRI CANAL ALONE

The statement on p. 315 shows that the canal would pay on the Commissioner's kharif alone.

I am of opinion that the Commissioner's net revenue of Rs. 32 lakhs could be obtained from the canal alone, but for calculation of profits, I give below two sample forecasts :

C. Based on the Commissioner's forecast of kharif and of rabi and bersim in the first and second sections only, with 150,000 acres bosi rabi in the third section.

D. Based on 25 per cent. of the area under cotton, which I consider a safe estimate, and on the sale price of land at Rs. 30 per acre, with the same rabi, bersim, and bosi as in C (p. 349).

There is naturally much guesswork about revenue forecasts, and no two experts could give the same figures. Every engineer who has suggested areas of rabi for this canal has proposed much greater areas than Mr. Lucas. In my 1906 project I took 550,000 acres rabi, and the 1909 project was based on 791,698 acres rabi, proposed by the Chief Engineer, Bombay; but Mr. Lucas, Commissioner in Sind, cut these down to 346,000 acres in Government land.

Only time will show whether Mr. Lucas is correct or the engineers, but the only safe plan appears to be to accept the Commissioner's moderate forecasts, and to make the canal first, as it will pay even on his kharif alone.

It would be a very backward step to reduce the kharif area and to make a smaller canal, as this would prevent the extension to, say, 75 per cent. of the cultivable area without enlargement of the canal, which would cause great inconvenience and loss both to Government and the zamindars.

If rabi becomes popular, and the intensity increases much above 55 per cent., the barrage can be constructed at any time.

It would be very risky, and would lead to almost certain failure, to construct the barrage along with the canal on the

CANAL ALONE

C		D			
Crop.	Acres.	Net Assessment per Acre.	Net Profit on Each Crop.	Total Net Profit.	
KHARIF—			Lakhs Rs.	Lakhs Rs.	Lakhs Rs.
Rice ...	46,800	3.3	1.5	1.5	
Gardens ...	6,000	3.3	0.2	0.2	
Cotton ...	435,260	4.2	22.5	22.5	
Other kharif ...	335,000	2.4	5.6	5.6	
	822,060	...	29.8	29.8	
Deduct present net kharif revenue	...	...	8.4	8.4	
Add—Rents and water-power	...	...	19.6	19.6	
Sale proceeds of land ...	...	...	0.9	0.9	
Net profit from kharif	...	...	1.7	1.7	
	...	...	...	...	27.3
RABI—					
Rabi ...	188,390	2.9	5.5	5.5	
Bersim ...	75,000	1.0	0.7	0.7	
Bosi rabi ...	150,000	2.5	3.7	3.7	
	338,390	...	9.9	9.9	
Deduct present net rabi revenue	...	...	1.6	1.6	
Net profit from rabi	...	...	...	...	8.3
Net profit from kharif and rabi	...	...	...	...	35.6

Return = 7.1 per cent. on 500 lakhs.
 Total cultivation, excluding bersim, 1,161,190.
 Intensity = 54½ per cent. of cultivable area.
 If assessment on cotton is reduced to Rs. 5 per acre,
 the return will be reduced to 6.2 per cent.

Return = 6.1 per cent. on 500 lakhs.
 Total cultivation, excluding bersim, 1,161,450.
 Intensity = 54½ per cent. of cultivable area.
 If assessment on cotton is reduced to Rs. 5 per acre, the return will be reduced to 5.3 per cent.

chance of the rabi area being more than double that given by an experienced Sind officer like Mr. Lucas.

On the Jamrao Canal only Punjabi colonists really take advantage of the cold weather supply for rabi.

If Sindhis have a fair cotton crop, they do not trouble about rabi, which overlaps the cotton-picking season. The Rohri Canal tract will be cultivated almost entirely by Sindhis, as there is very little land available for colonists.

GLOSSARY

Words.	Meanings.
Bersim - -	Egyptian clover.
Bosi rabi - -	Crops grown in the rabi season on land previously flooded from a canal in the inundation season.
Bund - - -	Embankment (generally applied to river embankments).
Cusecs - - -	Cubic feet per second.
Dry crop - -	In Sind, any crop except rice or sugar-cane.
Full supply -	The maximum supply carried by a canal.
Inundation -	Season when rivers are in flood.
Jagirland - -	Land granted revenue free, either in perpetuity or resumable in part on the death of the grantees.
Kharif season	Inundation or flood season.
KMSL - - -	Karachi mean sea-level.
Lakh - - -	100,000 (Rs. 100,000 = £6,700).
Maund - - -	80 pounds.
Rabi season -	The cold weather season, when the river is low.
R.L. - - -	Reduced level (in Sind, height above KMSL).
Seepage - - -	See p. 332.
Silt - - -	Sediment brought down from the mountains by the river.
Sind Sudhar -	Sind Improvement (Sindhi name for Rohri Canal).
Zamindar - -	Land-owner.

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DISCUSSION ON THE FOREGOING PAPER

At a meeting of the East India Association, held at Caxton Hall, Westminster, S.W., on Monday, July 27, 1914, a paper was read by Dr. T. Summers, C.I.E., D.Sc., M.I.C.E., entitled "Development of Cotton in India: Sind, a Second Egypt." Sir Walter C. Hughes, C.I.E., was in the chair, and the following, amongst others, were present: The Right Hon. Lord Lamington, G.C.M.G., G.C.I.E., Sir Arundel T. Arundel, K.C.S.I., Sir Andrew Wingate, K.C.I.E., Sir Mancherjee M. Bhownaggee, K.C.I.E., Sir Frank C. Gates, K.C.I.E., Sir Swinton Jacob, K.C.I.E., C.V.O., Colonel C. E. Yate, C.S.I., C.M.G., M.P., Mr. H. Kelway-Bamber, M.V.O., Mr. and Mrs. R. A. Leslie Moore, Mr. J. B. Pennington, Mr. G. O. W. Dunn, Mr. R. F. Chisholm, Mr. D. N. Reid, Surgeon-General Evatt, C.B., A. Burnett Hurst, Esq., Mr. G. V. Utamsing, Mr. W. Coldstream, Mr. P. Phillipowsky, Mr. H. C. West, Mr. C. H. Payne, Syed Abdul Majid, LL.D., Mr. G. C. Whitworth, Mr. G. A. K. Luhani, Mr. Ibrahim S. Haji, Mr. S. W. Brett, Mr. H. R. Cook, Mr. Ali Fahmy Mohamed, Colonel A. S. Roberts, Mr. F. H. Brown, Mr. Colman P. Hyman, Mr. S. Hadwyn, Mr. A. Bruce-Joy, R.H.A., F.R.G.S., Colonel Lowry, Mr. A. F. Woodburn, Mrs. White, Mr. James Macdonald, Mr. John Reid, Mr. S. Hossein, Mr. S. S. Haji, Mr. F. H. Marchant, and Dr. John Pollen, C.I.E., Hon. Secretary.

LORD LAMINGTON: Ladies and gentlemen, I have to express my regret that I cannot stay here to listen to what is, undoubtedly, a very interesting paper (I have already had the pleasure of reading it); and I therefore ask, as has been announced publicly, that Sir Walter Hughes should take the chair on this occasion. I cannot conceive anybody more competent to do so. I also hope that there are others here present who will be able to join in the discussion, which should be one of some moment, on this exceptionally interesting paper which has been prepared by Dr. Summers with reference to Sind, and which is very well worthy of your acceptance. I have to go down to the House of Lords, otherwise I should certainly stay.

The CHAIRMAN: Ladies and gentlemen, before proceeding with the business of the meeting I should like to mention that I have had a letter

from Lord Reay in which he expresses his great regret at being unable to attend this meeting.

I have now great pleasure in introducing to you my friend Dr. Summers, who proposes to lay before you this afternoon the subject of irrigation in Sind, more especially in connection with the development of cotton cultivation. For several years before his retirement Dr. Summers was Chief Engineer in Sind, and he was engaged in the investigation of projects of great magnitude for the extension of the irrigational system of the province. He possesses, therefore, great knowledge and experience of the subject. His services were rewarded by the recent bestowal of the Companionship of the Indian Empire, an honour that, on all hands, was regarded as thoroughly deserved, and I take this opportunity of warmly congratulating Dr. Summers on the distinction.

I now, with your permission, call upon Dr. Summers to read his paper.

The LECTURER, who was received with applause, then read his paper.

The CHAIRMAN: Ladies and gentlemen, when I was first asked to preside at this meeting I sought to be excused on the ground of having no time, but I find it extremely difficult to say "No" to my friend Dr. Pollen when he is on the war-path, under the banner of the East India Association, and I gave in. Unfortunately, however, it is literally true that I have not had the time to go into this matter as fully as I would have liked, and I am sorry that I can give only a slender contribution towards this discussion; but with your permission I will give the substance of a few notes I made in going through the paper which has just been read by Dr. Summers. I am afraid I am not competent to offer any opinion on the prospects of cotton cultivation in Sind. The cotton of Guzerat and other parts of the Presidency is dependent on the rainfall, and there is, or used to be, a prejudice against irrigating the crop on the grounds that it resulted in more stalk at the expense of the cotton bolls. In Sind, however, cotton cannot be grown without irrigation, but this may be the explanation of the short staple of the indigenous cotton. I have received a letter from Sir Evan James on this branch of the subject, which I will ask the Secretary to read. I do not understand that reliance is placed on the introduction of exotic cotton into Sind; on the contrary, we are told that Egyptian cotton has not proved a success, and that the estimates of the Revenue receipts from the Rohri Canal are based on the cultivation being restricted to Sindhi cotton, which, though short in staple, commands a good price. The part of Dr. Summers' paper which refers to high-level perennial canals is of great interest to me. It is now more than forty years since I was first engaged on the plans of the Rohri Canal under General Fife, the originator of that great scheme, as he was of all the more important irrigational projects as yet undertaken throughout the length and breadth of the Bombay Presidency. I was then his personal assistant, and continued to serve in the Irrigation Department for, in all, about twenty years. During this period the Rohri Canal project was repeatedly, at intervals, under discussion. It was revived about 1890, shortly before my transfer to the Port Trust, and was then referred to a local committee, who pigeon-holed the scheme. Then came the Irrigation

Commission, and a more enlightened policy was inaugurated. It became a question not of whether the Rohri Canal shall be made or not, but of whether the canal or the "barrage" across the Indus at Sukknr should be made first. I gather from Appendix IV. to Dr. Summers' paper that a definite decision has now been come to, to the effect that the barrage shall be deferred, at any rate until after the first and second sections of the canal have been opened for irrigation. I presume, therefore, that it is the intention to sanction the canal to, at any rate, this extent. There is one point I should like to refer to as affecting the question of the return on the capital expenditure to be incurred on these works. It is the very heavy charges for establishment which are a serious dead weight. Dr. Summers' estimate of the cost of the canal is £3,300,000, and includes a sum of over £600,000 for public works establishment charges. This is exclusive of an army of foremen, timekeepers, clerks, and others who will be charged to works. The provision is calculated under departmental rates which I think do not make sufficient allowance for the circumstances attending the execution of a work of this magnitude, and it would seem that there is room for a very considerable economy in this respect. Any saving would, of course, proportionately enhance the percentage of profit on the total outlay.

The HON. SECRETARY read the following letters from Sir Evan James and Mr. Joyner expressing their regret at not being able to be present, and dealing with the subject under discussion :

July 18, 1914.

I am sorry I cannot come to the meeting at the Caxton Hall on Monday 27th, as I shall be in Wales on that day. Otherwise I should have liked very much to come, for the subject of cotton-growing in Sind is a subject which I worked up once, and I know something about, and I was Commissioner there for ten years.

People nowadays make the mistake of thinking that the problem of cotton-growing in India has not attracted attention before. Let me remind you, therefore, that the problem as it presented itself to Sind was thoroughly thrashed out for at least twenty or twenty-five years between, I think, 1865 and 1890. The Duke of Argyll—Secretary of State for India at the time of the cotton mania—sent out four Scotch gardeners to make thorough experiments in the growth of various staples of cotton, and one man was for, I suppose, quite twenty years manager of a model farm at Salaru, in the Hala Taluka, where the best Sind cotton used to come from. There he tried every sort and kind of cotton that was to be found, and after pretty exhaustive experiments came to the conclusion that no exotic cotton would flourish or pay in Sind. There exists an indigenous cotton in Sind which grows freely and plentifully, but its staple is very short and very weak ; its price is high, and its principal use is to be sent to Germany, where it is used for adulterating wool, and manufactured into so-called "whole wool" workmen's sweaters. Sind cotton also possesses a peculiar sheen, and is used for mixing, not to say adulterating, really good long staple cotton which has been dirtied or spoilt by the rain, as it gives it a much better appearance, which the spinners like.

Not very long before I left Sind—I think about 1898—possibly a year or two later—I received an application from a leading Parsee gentleman in Bombay asking if I would take the question up, and see whether Sind could not be used for growing valuable varieties of long staple cotton, like Sea Island, or the old Hinghan-Ghat cotton of the Berars and Central Provinces, which Lionel Ashburner introduced into Khandesh. I looked up the old reports of Mr. Strachan, and came to the conclusion that a renewal of the expenditure and efforts for introducing good exotic cotton into Sind would be a mistake; at any rate, I should have had no time to start the hare afresh, as I was leaving Sind very shortly, so I dropped the idea altogether.

I do not say that occasionally a good crop may not be raised from exotic seed in Sind, in particularly favoured places, such as newly formed virgin loam, but it won't last.

Cotton experiments in the Bombay Presidency, except as regards Dharwar, about which I will not speak, where the old cotton was very good, have, I am afraid, been a melancholy failure. Ashburner, at considerable expense, uprooted in the best Talukas of East Khandesh the old indigenous Khandesh cotton, and introduced fine, silky Hinghan Ghat seed. The prices of cotton were very very high at the time of the American War, and for a year or two later, and the Khandesh ryots made very large profits indeed, as the new cotton was grown over such large areas that the Khandesh cotton won a separate grade of its own. But gradually it was found that the out-turn of the crop could not be depended upon, owing to the climate, and when Ashburner left, the old Khandesh cotton, which at any rate produced plentiful crops, was reintroduced. Years later, when the late Mr. E. C. Ozanne was Director of Agriculture, he went into the history of cotton experiments in Khandesh very thoroughly, and he came to the conclusion that it would be of no use attempting Ashburner's drastic methods of forcing long staple cotton from Berar into Khandesh again, as the cultivators did not like it; they had found by experience that good plentiful crops were not to be depended upon, and owing to the abnormal prices of the cotton mania having subsided to something very small, the difference between the profits on long staple cotton (in many cases mixed with Khandesh cotton) would not pay them for abandoning the old indigenous staple cotton.

When I was Commissioner in Northern Division my attention was attracted to the great adulteration and bad state in which the old valuable Broach cotton was sent to Liverpool, leading to its fetching a very inferior price, and I went rather carefully into the matter, in order to see whether any Government supervision over the ginning factories, such as had existed during the period of the Cotton Frauds Act, would be of any use as an increase in the price of the cotton of only a halfpenny or penny a pound would have been a great boon to the cultivators of the Broach cotton field. But I found it was no good interfering. After a long fight the merchants of Bombay had succeeded in procuring the repeal of the Cotton Frauds Act, alleging that there was no reason why Government should interfere in the cotton trade any more than in any other trade; that it was

entirely a matter of supply and demand; that the merchants were quite capable of looking after their own interests and buying what cotton suited the market; and I found that the Government also, after the very long discussion that had taken place before the Act was repealed, were entirely unwilling to reopen the question.

Nowadays one hears a great deal about the requirements of Lancashire, and the world generally, for more good cotton. We hear of extensive operations being undertaken in Nigeria, British East Africa, the Soudan, and other countries, and naturally people who know that India and Sind grow cotton of a kind begin to inquire why experiments should not be made there, and India turn out better and more plentiful supplies of cotton than it does at present. But they forget the subject has already been thrashed out *ad nauseam* in the last fifty years. Indeed, long before the cotton mania in the early '60's great efforts had been made by the Government to improve and extend cotton cultivation, and you would find in the India Office a great printed book on the subject (I forget the author's name, but I think it was Forbes, or Cassels) describing what had been done.

I think, therefore, had I been present at the meeting I should have invited attention to the past history of the question, with which I was familiar for thirty-five years, up to 1890, and suggest that enthusiasm should "gang warily."

(Signed) H. EVAN M. JAMES.

July 25, 1914.

I am very glad indeed that you have written your paper on "The Development of Cotton in India," by making the proposed perennial canal on the left bank of the Indus, as it cannot fail to help forward this grand project, which I was convinced twenty-three years ago was the finest and most promising irrigation project ever then brought forward in India.

To me, its very great utility is so self-evident, and its certainty of bringing both direct and indirect wealth to the Government and the people so sure, that it is impossible for me to understand how or why there should ever be any doubt about it. I see no difficulty at all which cannot be overcome. The great needs of the world now are, and still more in the future will be, cotton and wheat, and here we have great facilities for producing large quantities of both. If this grand proposal had been carried out twenty years back, when proposed by me, Sind would now be as it should be, and has been, one of the most fertile and prosperous parts of the world, and the Government and the people be many million pounds richer. To hesitate, now you have so ably brought it forward again, is simply criminal.

The great delay must be, I think, due to the barrage proposal, which has, to use a vulgar expression, "drawn a red herring across the trail." It is very difficult to say, with any certainty, what this barrage would ultimately cost, the difficulties of construction will be so great. Then there is, in my opinion, a great danger in placing a barrage across an enormous river, subject to such great floods, like the Indus, which is there still deltaic; running on a ridge, formed by the river itself, and which the river may so

easily remove. If that were to happen, the loss and destruction would be terrible. Then, are the advantages to be gained by the barrage enough to warrant its great cost and delay in construction, of the pressing demands of the country, and the possible great risk? I do not see that the advantages to be gained are so great. It would not provide water by storage, it only raises the level; but, as far as I remember at this long time, you have ample head to enable all the water to be satisfactorily utilized on the contemplated area.

The large irrigation works now carried out in the Punjab should tend to improve the supply of water in Sind, modifying the flow by taking up water when in excess, and giving it back to the river when it would otherwise be scarcer.

About the silting of the proposed canal head, as to which I understand some doubt has been expressed, I fully agree with you that this can undoubtedly be successfully provided against quite independently of any barrage. I have explained lately to you that what I proposed was to have a large settling basin just below the Bhakkar branch of the river, from which the canal headworks would take off. This would allow the heavy and infertile sandy silt to be deposited, and be periodically scoured through, by lifting large roller-bearing gates at both up and downstream ends and allowing the whole force of the river to rush through, the sand being stirred up mechanically if found necessary. The lighter fertile silt would pass into the canal, which would have a velocity sufficient to carry it, and so on to the fields. I consider there would be no difficulty experienced in keeping the head of the canal free from silt at all times by this or some similar method.

The sinful and absurd waste of money, water, and silt in so much of the land under command of the river from Sakkar, by letting water run down the river and then lifting it up, clear water only, at a still further great expenditure, should not have been allowed to continue so long.

Other parts of India have some rainfall to depend upon, so making expenditure on irrigation often uncertain of giving a return; but in Sind it is not so, and money spent there must, as there is practically no rainfall, give a certain return. This project would add a new province to the Empire of some 6,000 square miles of cotton and wheat close to one of the nearest ports to the West, from which both could often be exported when the cost of inland carriage might prevent export from the Punjab.

If irrigation in time proved so extensive in both Sind and the Punjab as to cause a shortage of water in some seasons, it would not be impossible, probably quite easy, to make enormous storage lakes at the foot of the Himalayas, where probably cheap sites for such could be found.

I am sorry I got the notice too late to attend the meeting, or I should certainly have attended.

(Signed) R. B. JOYNER, C.L.E., M.I.C.E.

MR. OWEN DUNN stated that he had not come prepared to speak on the subject under discussion, having, in fact, only had a copy of the paper since he entered the room, and he hoped that, as his remarks would be purely

spontaneous, allowance would be made for his not having been able to make any preparation.

He had been in Sind for about four and a half years, late in his service, but while there he was fortunate enough to be associated with Dr. Summers, and he would say from his experience that no man was better qualified to talk about the conditions in Sind and to express a sound opinion as regards irrigation canals in that country than the lecturer. Dr. Summers' outstanding characteristic was his dogged perseverance in anything he set his mind to. The Fuleli Canal owed much to this, and to it might, he thought, be attributed the fact that Dr. Summers was here to-day in excellent health, having absolutely refused to succumb to the many years of ill-health which were his portion in Sind. Mr. Dunn had no doubt that with his dour determination Dr. Summers will refuse to shuffle off this mortal coil until he has seen the Rohri Canal well under way. With regard to the arguments for the construction of the Rohri Canal in advance of the barrage Mr. Dunn was entirely in accord with them. He was very doubtful, however, concerning the eventual necessity for a barrage, which would be a very costly and hazardous undertaking—at all events as regards the canal on the left bank which Dr. Summers advocated, although possibly as regards the right bank it might one day be found advisable; but it would not then be under such favourable conditions, because the revenue already derived from the canals on the right bank was a very considerable one, and other and less expensive improvements might be possible. The one great desideratum with regard to the vast tract of land dealt with in Dr. Summers' project was to provide flow irrigation where there was now only lift. He considered that the Sindhis in the "flow" areas were very careless and wasteful cultivators, with a very exaggerated idea of the amount of water required for their crops, and sometimes flooded their land to such an extent that they did it more harm than good. This explained the great popularity of rice cultivation. In the "lift" areas much more care had to be exercised in the cultivation because of the labour and expense of lifting the water. The people who were accustomed to cultivation of that kind, when they got flow water given to them on a regular system, as adopted on the Chenab Canal and the Jamrao Canal, should undoubtedly prove a very excellent class of cultivators, and should show very good results. In the speaker's opinion, what was undoubtedly required was an ample volume of slow-flowing water carrying the fertilizing silt, which would flow over the ground. It had been shown by Dr. Summers that the canal he proposed would provide this for the large tract of land he was dealing with, and it was to be hoped that before long the Government authorities would see their way to sanction the project.

With regard to the subject of establishment charges, which had been mentioned by the Chairman, that had always been a great grievance in Sind. It was the Government rule that a large percentage for establishment charges should be provided in the estimates; but it was, he believed, now generally accepted that in a project of the magnitude under discussion the actual charges only should be debited against the scheme, plus a small percentage for secretariat and administration.

Reference had been made to the Fuleli Canal, and the speaker thought it ought to be known that the fact that the Fuleli was now keeping so clear of silt was due to a project of Dr. Summers, which the speaker had seen brought into operation, by which the water was enabled to have a free run into the Ran of Cutch.

MR. OWEN DUNN concluded his remarks by apologizing for the very incomplete manner in which he had been able to speak on an extremely interesting subject.

COLONEL YATE, M.P., remarked that he was not qualified to speak on the technical subject under discussion, but had come with the intention of learning, so as to be able to speak in the House of Commons when the Indian Estimates were under discussion. He thought they were all agreed that the great object was to increase the cultivation of cotton in India. Although the cotton staple in India was very short, and was mostly used in India itself and in Japan, yet every bale of cotton produced in India liberated a bale of longer staple cotton from somewhere else for use in Manchester or other places where it was so much required, and so tended to raise the world's supply. To him (the speaker), as a layman, it seemed that the irrigation project before the meeting should certainly be carried out. There was nothing to prevent it being carried out except the need of funds, and he hoped they would be able to induce the Government of India to provide those funds at the earliest possible moment.

MR. COLDSTREAM asked whether the Agricultural Department was continuing experiments to ascertain the qualities of the various cottons. About fifty years ago experiments were undertaken in the Punjab with Florida cotton and Egyptian cotton, and it would be interesting to know whether satisfactory conclusions had been reached as to the varieties which suited the various cotton districts of India.

MR. DONALD REID said he would like to speak on cotton cultivation from the point of view of a practical agriculturist. He had had for eleven years a sample of molasquit, a foodstuff prepared from the fibre of sugarcane and molasses, and it was still in good condition, but was, in his opinion, a poor foodstuff, and required to be mixed with concentrated food. As the best concentrated feeding-stuff in existence was decorticated cotton seed, he approved of the extension of cotton cultivation by every possible means in order to provide better food for the cattle of India.

MR. HADWYN asked if the lecturer could say how much capital would be required to form a company to develop his scheme on lines similar to that of the Cotton-Growing Association.

DR. POLLEN said that, as an old Sindhi, he would like to say how deeply impressed he had been by Dr. Summers' paper. He knew, in common with his friend Sir Evan James, Mr. Owen Dunn, Sir Andrew Wingate, and others, a good deal about the Sindis, and he thought that all those who had served in Sind had the same feeling of affection for the old province, and wished to see the people prosperous and happy. There was no more delightful country in India than

Sind, and the people themselves were thoroughly kind and devotedly loyal. They might perhaps be a little lax as cultivators, but they were a cheery, good-tempered race. They were, no doubt, happy-go-lucky, and seemed to act on the old Russian principle, "Perhaps! Don't be afraid! And God is not without mercy." But they managed to get on somehow. He had read with real pleasure Dr. Summers' able paper, and was highly gratified at the glorious prospect which it opened up, not only for Sind, but for the Empire at large. He had often wandered along the ridge that Dr. Summers had spoken about, and one could see that it was the ridge left by the great river when it made a highland for itself, along which it flowed before it hurst its banks and took a direction to the right. He understood that the tendency of the Indus was nearly always to go right, and he believed that this was due to something in the way that the earth went round, or whatever it was that happened which caused the river to turn in that direction. It had often been explained to him that the Indus flowed along, as it were, on the top of the reverse of a plate. It heightened the back of the plate as it flowed along, throwing up its bank on both sides, and gradually rising higher and higher above the level of the land. When it rose too high it often burst its banks and took it into its head to wander a bit, and went off on an excursion, leaving its old bed sometimes six or seven, or even fifteen, miles away. He remembered how old Mir Ali Murad Khan (the Mir of Khairpur) once explained to him that there was no Tyrant in Sind nowadays, and that there was no such thing as personal tyranny under the British Raj, but that, nevertheless, there was an awful Tyrant in the land, and indeed throughout the whole of India, and that Tyrant was "English law." The Mir said "English law" was exactly like the River Indus—one never knew what it was going to do, and like the great river it would, without rhyme or reason, take away acres of one man's property in a night and give them to another! Dr. Pollen explained that he merely rose to express his admiration for Dr. Summers' excellent paper, and to say how thoroughly convinced he was that in his project for restoring the famous fertility of Sind Dr. Summers was profoundly right, and he (Dr. Pollen) could not understand how that strange creature the Government of India could have failed to have been convinced long ago by the very plain reason and arguments which had been urged for starting the Indus again on its old course, not as a wandering Tyrant, but under strict governmental control. Sir Walter Hughes had hinted at the expense of the project and the cost of its upkeep. But, after all, good things were cheap no matter what they cost, and the proposed scheme was a good one and well worth the proposed expenditure. He therefore hoped the Government would see their way to do what Dr. Summers recommended, and the sooner they did so the better for Sind and all concerned.

SIR ARUNDEL T. ARUNDEL said he rose to propose a vote of thanks to the Chairman and to Dr. Summers. The Association was indebted to Sir Walter Hughes for his presence, and for presiding on this occasion. Dr. Summers had evidently taken a great deal of pains to elaborate the scheme that had been put before the meeting, and the speaker hoped that success would attend his efforts.

SIR ANDREW WINGATE stated that he rose to second the vote of thanks. He thought that they should all be very grateful to Sir Walter Hughes for presiding at the meeting to-day, because he was one of the men who belonged to the Bombay Presidency, who had done a wonderful amount of work for Bombay, the gateway of India, and his name carried immense weight. He stated that he had had the pleasure of knowing Dr. Summers in Sind, although he did not expect that Dr. Summers remembered him. On that occasion he was very much impressed with Dr. Summers' enthusiasm, and all who had heard the paper read to-day felt that his heart was in Sind and in this particular work. A good deal had been said about the finance, which was a very important point. Finances had been going in the way of irrigation of the Punjab a great deal, and people who landed at Karachi could see the enormous new wharves and extensions going on, and would naturally think that it is all due to an increase in Sind; but it was due to the increase in the Punjab. Those great projects were coming to an end, and he ventured to think that the turn of Sind was coming. It had been said that Sind had got tremendous possibilities before it, but that the water had been taken up; but he was very glad to hear that it had not injured the prospects of Sind at all, and that the present project, from an engineering point of view, was quite good. That was the great point. He had not the slightest doubt that the project would come. With regard to the estimates of revenue, he was very glad to hear what had been said about them. The assessment now was said to be Rs. 4 or Rs. 5, and it was proposed to be Rs. 6. He thought that that was about as high as you could go, and did not think it likely that you would be able to get Rs. 9, because there were great projects in the Soudan and also in the Euphrates Valley, and one felt that no figures ought to be based upon any very sanguine estimates of the assessment. One liked to feel that the cultivators, when they got the canal, would have a benefit, and that the last rupee would not be taken out of them. On these grounds he had the greatest pleasure in seconding the vote of thanks.

DR. SUMMERS, in thanking the meeting for the kind way in which they had received his paper, said he hoped that it would assist in advancing Sind's development. He said that several suggestions had been made regarding the construction of the Rohri Canal by a company. The first was in 1854, during the great irrigation boom, when several Indian officials, with Colonel Grant as Chairman, met in London and proposed to form a "Company of Water Merchants" to promote the construction of irrigation and navigation canals all over India. They proposed to begin with a modest capital of £500,000, and to start with the most promising work in India, the Rohri Canal, the success of which they anticipated would lead to a rush for the £300,000,000 stock, their proposed ultimate capital. The East India Company, as a matter of form, were to be requested to guarantee a dividend of 5 per cent.

The next suggestion for a company was made in 1892, but like that of 1854, it did not mature. Dr. Summers said he had just heard from India that a syndicate is ready to construct the Rohri Canal and barrage on condition that the whole of the profits are given to the company; but this

could only pay if the syndicate were allowed to charge their own rates of assessment, which Government would never consent to. The only practicable company would be one to construct the canal first, with a guarantee of $3\frac{1}{2}$ or 4 per cent., half profits above the guarantee to go to Government, and half to the company. The rates of assessment to be fixed by Government, who would undertake the management of the canals. With regard to the capital required, probably a million to a million and a half would be sufficient, as revenue would begin to come in, after three or four years, when the first section of the canal is opened.

As to the value of Sind cotton, Mr. Schmidt, the Secretary of the Federation of Master Cotton Spinners, has pointed out in his recent report on Indian cotton that it is highly appreciated, on account of its whiteness, for mixing with other cottons. To show the profits made from Sind cotton, Dr. Summers gave an instance of a Parsi subordinate who was given 1,500 acres on retirement, and who stated that within a year or two he made over £500 profit. He now owns houses both at Hyderabad and on his estate. It is not uncommon for men to make 50 to 75 per cent. on money invested in land. The Rohri tract is full of wealth, but it is hardly touched yet. It only wants water to make valuable crops grow at once.

On the right bank of the Indus below Sukkur, about 60 per cent. of the culturable land is cultivated annually, because the land lies low compared with the river, and so gets water by flow. On the left bank the land lies so high that water cannot flow on to it, but cultivators have to lift it on to their fields, sometimes as much as 20 feet, at great cost and waste of labour. The cost of lift is estimated at 7s. to £1 per acre, while the people will have to pay a rent of only 8s. per acre for cotton. In Egypt the average rent for cotton land is from £4 to £5 per acre, and in Scotland 25s. to 30s. is an ordinary rent for average cultivable land. The scheme including the barrage cannot pay with cotton at 8s. per acre on the Commissioner's forecast.

The CHAIRMAN: I should like to associate myself with all that has been said in appreciation of Dr. Summers' paper and with the vote of thanks that has been passed to him for the very interesting paper that he has given us this afternoon. I also thank the mover and the seconder for their remarks with reference to myself.

Mr. W. L. Strange, late Chief Engineer in Sind, writes :

The arrangements generally adopted in modern canals, fed from silt-laden rivers, to diminish the tendency of such works to silt are :

(a) To let the river approach the head regulator of the canal with as gentle and regular flow as practicable, so as to prevent the stirring up of heavy sand, pebbles, etc., from the river bed and its carriage into the canal.

(b) The widening of the canal head and head regulator to reduce the inlet velocity of the river water and its power to carry heavy silt.

(c) The taking into the canal of top water from the river, as this contains only the lightest particles of silt.

(d) The provision of large escape discharging power below the head regulator, so as to get rid of heavy silt which has been deposited in the canal.

At the head of the proposed Rohri Canal there is not any special difficulty in arranging for (a), (b), and (c), while the existence of a considerable fall in the River at the Sukkur Gorge, immediately down stream of the proposed take-off, is a condition unusually favourable for (d).

Mr. Arno Schmidt, Secretary of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, writes :

I was unfortunately prevented from being present at the lecture of Dr. Summers dealing with the prospects of cotton cultivation in Sind. I have read Dr. Summers' paper, and would have liked to have made the following remarks had I been present :

"I have undertaken three tours of investigation through the cotton-growing districts of India, and have visited Sind twice. In October last I stayed at Hyderabad, Mirpurkhas, Sukkur, and Shikarpur. As regards the general impression, may I say that, having had the advantage of travelling through Egypt, I could not help but liken the characteristics of Sind to those existing in Egypt.

"The cotton grown in Sind at present is, of course, of quite a different type from that produced in Egypt, but even the Egyptian cotton experiments undertaken by the Government some years ago have proved the feasibility of producing a high-priced cotton, provided sufficient water is obtainable for irrigation. The few defects in the cotton produced by these experiments could be traced to the inexperience of the cultivators in growing the superior cotton, and to the difficulty of marketing the different lots. An English spinner, who used some lots of the Egyptian cotton grown in Sind, stated that they were quite equal to the cotton which he received from Egypt.

"As regards the American cotton grown in Sind, the Bombay Millowners' Syndicate, which was established there two years ago for the purpose of buying cotton, expressed itself as highly satisfied with the cotton obtained. This cotton grown in Sind from American seed is used by the Bombay mills to replace cotton which they would have had to import from America. At a recent meeting of the Committee of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, Mr. N. N. Wadia, of Bombay, exhibited a sample of American cotton grown in Sind, and it was the unanimous opinion of the Committee that this cotton could be used with advantage in all the European countries, including England.

"As regards the indigenous kind of cotton which is at present grown by most cultivators in Sind, I may say that it is very strong, although short. It has a beautiful white colour, for which reason it is highly appreciated by the spinners in India, and especially on the Continent. Owing to the

excellent colour, it is frequently mixed with American cotton to improve the colour of the latter. Cotton grown in the Punjab is often sold as Sind cotton, as the reputation of the latter is greater than that of the former.

"The construction of the Rohri Canal in Sind would undoubtedly be welcomed by the cotton industry of the world, as large quantities of very serviceable cotton would be then produced on at least half a million acres. The cotton industry is anxious to increase its supply, as, owing to the enormous increase in the consumption of cotton, which is partly due to the many additional uses to which cotton is being put, the cotton industry is suffering already from a shortage of the raw material."

TURKEY, ENGLAND, AND THE PRESENT CRISIS*

BY MARMADUKE PICKTHALL

I HAVE been asked to speak to you about Turkey—present-day Turkey from a political point of view. Well, in its relation to the Powers of Europe, the history of Turkey, for a generation past, may be roughly described as a long fight for influence between Russia and Germany, with varying fortunes, throughout which the Turks themselves, the great majority among them, heartily distrusted both those Powers, and desired no other help than that of England. You will remember the great spontaneous outburst of enthusiasm for England which marked the Turkish Revolution of 1908, and the no less noteworthy manifestations of dislike for Germany. Germany had become identified in the popular imagination with the tyranny of Abdur Hamid II., even more than Russia—the Power which, as we now know, was in great measure responsible for the existence of that tyranny—the most cruel that the Turkish Empire has endured. For the Czar had personally promised, early in that Sultan's reign, that Russia would not again make war on Turkey so long as the Constitution was withheld. England, the old ally of Turkey, remained the favourite of the Turkish people. The name of England carried with it the ideas of honest

* Address delivered at a private house in London, September 15, 1914.

dealing, progress, and enlightenment. The days of the British alliance were looked back on almost as a Golden Age. The pro-British Midhat Pasha became the national hero, though his name had to be whispered while the tyrant reigned. You know the fate of Midhat. He was strangled in exile, and his head was sent by post to Yildiz in a box labelled "Objet d'Art. Précieux." But I am not here to dwell upon the horrors of the old régime, which had (as I know well) its genial side, and even its advantages, for Turkey. It is dead and buried. Let it rest. My concern to-night is with the new régime inaugurated at the Revolution.

The Young Turks, I find, are pretty generally distrusted here in England, quite unreasonably. They are blamed for everything that has befallen their unlucky country in these last six years. People say that they have made their country bankrupt, when the truth is they inherited a bankrupt country from the old régime. They have been blamed for demoralizing the Turkish army, when the truth is, as I personally can bear witness, that they have in every way enormously improved it. All their great reforms, achieved or in the process of achievement, are derided. Most strange of all, coming from the lips of Englishmen, is the objection: "They are mostly Jews"! That is quite untrue. There are more Christians than Jews among the Young Turk party, of which all the Christian and the Jewish members put together constitute but a small minority. There are Jews and Christians also in the Old Turk party—a much smaller one—in very much the same proportion. No party that excluded Jews and Christians could fairly claim to represent the Turkish Empire. But the majority of the Young Turks—some of whom are very aged, are real old-fashioned Muslims—Turks *par excellence*. That party would more accurately be described as the Nationalist Turkish party, as opposed to the clique of wealthy old officials—there is no aristocracy in Turkey—whose ideals are generally cosmopolitan, and their manners French.

Those old officials have never looked on Turkey as a beloved country, but as a position only to be maintained by favour of this, that, or the other Power of Europe. The Union and Progress party, on the contrary, has a national ideal and a fine one, which accounts for its increasing hold upon the people. It was guilty of great blunders at the outset, including as it did among its leaders a few individuals who knew much more of Paris than they did of Turkey, and had more sympathy with French agnostics than with true believers. One heard of officers in the army mocking the soldiers at their prayers; of proposals, than which nothing more unpopular could be imagined, that all the Empire should at once discard the fez and take to hats. But that was only in the first two years. The spirit of the Young Turk movement was against these anti-Turks, as I must call them, who very soon returned in great disgust to Paris, where you may hear them saying that the Turks are quite uncivilized. Then, in the period of German influence, there came the scheme for Ottomanizing the whole Empire, the disarming of the Macedonians and Albanians. That was a very serious mistake of policy. But the men who made it were not animated by brutality. They had a great idea; they wished to realize it hastily; time was evidently short for Europe menaced; and what very few people seem to realize is that it was the astonishing success, and not the failure, of their efforts which produced that fury of the Balkan States of which we now see the result. The Young Turks are not incapable, believe me; their initial, irretrievable mistake was in ever regarding Macedonia, with its medley of conflicting races, as the heart of Turkey, which they certainly did. The mistake is not, perhaps, unnatural when we recollect that the Revolution had its origin in Macedonia, and that so many of the Young Turk leaders sprang from thence. During their first four years of power they spent much money upon public works, and much attention on reforms in European Turkey, and neglected Asia. It was Macedonia first. One must remember that.

Well, whatever may have been the merits of the Ottomanizing scheme, it angered not only Macedonians and Albanians, but Circassians, Kurds, and Arabs. There can be little doubt that the fall of the Young Turks in July, 1912, was welcomed by a great majority of people in the Turkish Empire. It was in reality a great disaster for the country, for their successors were, with one or two exceptions, incapable. They tampered with the army, persecuting Union and Progress officers, and, by their foolish trust in the assurances of certain Powers of Europe, made possible the great disaster of the Balkan War. No one outside their own adherents—who have been described “the upper ten thousand of old Hamidian days” (they actually numbered 13,000 who could be relied on, for the lists were found after the assassination of poor Mahmud Shevket)—no one outside their own adherents bewailed their downfall in the little revolution of January, 1913, though many people, including thousands of Young Turks, bewailed the death of Nâzim in that revolution. It was a very different Young Turk party which returned to power in January from that which fell from office in July. Many of the chiefs had been in prison or in exile; some had served unknown as privates in the Turkish army. They had all been through the valley of humiliation both as patriots and individuals. Two months after their return to power, one of their most violent opponents, at the time in hiding in my village on the coast of Asia, said to me: “Who is inspiring them? Those fellows could not do so much good work in two short months if they depended only on their own capacities.” It was experience which inspired them. Before Mahmud Shevket Pasha met his death they had done admirable work, and his spirit seems to dwell with his survivors. I saw the marvellous change which was wrought in five months—months of infinite depression for the Turks—and with the country bankrupt. The Civil Service by the end of those five months had been working without pay for near a year. Ministers of State were making shift with half—

at times even a third—of their salaries. Every penny that could be obtained was spent upon the army and on public works. A capital in such case might well deteriorate; Constantinople in its Turkish aspect improved steadily. It gathered fresh enthusiasm, and radiated hope into the provinces. That gave me a respect for the Young Turks as earnest patriots. No other men in Turkey could have done what they did.

Now there seems to be a notion prevalent in England that the Young Turks, as a party, are pro-German. Look at the facts. We have already noticed their enthusiasm for England at the Revolution. How did they after that come under German influence, and so soon? Well, for one thing, I suppose that everybody will admit that our diplomacy was hopelessly outclassed. We had nobody in all our foreign service to compare with the late Baron Marschall von Bieberstein. And the British Embassy at Constantinople has not of late years been particularly brilliant. Also we were hampered by our understanding with Russia—a thing the Turks could never understand. England the friend of liberty—and Russia! Only to-day they see the meaning of it, and forgive us. But the principal reason was our utter lack of tact, and, I may add, of comprehension—the two generally go together. We attached a condition to our support of the Young Turks: that they should accept old Kiamil Pasha, England's ancient protégé, as head of their new Turkey. Now, Kiamil Pasha was not a bad man, and had been something of a statesman in his day; but he was very old, and, being old, conservative; and his sons were as the sons of Eli, bywords for corruption. The Young Turks, who were burning to begin reforms at once, and had a standard of integrity, tried working with them for a time, but not for long. And then began a period of disillusion with the ways of England. The English would not deal with the Committee, nor recognize the least necessity for its existence when once the Constitution had been re-established. They would not see the point of the Young

Turks' objection that the Constitution required careful watching for a term of years. So it got about that England, moved by Russia, wanted to restore the old régime. Germany, on the other hand, recognized the Committee. Germany was therefore the one Power who could be looked to to defend the Turkish Empire against Russia, the hereditary foe. But the Young Turks as a party would at any moment have preferred the hand of England to the hand of Germany. Nor is that the only time when, as they consider, England failed them. After the Bulgars, Serbs, and Russian volunteers took Adrianople, Mahmud Shevket Pasha, wishing to do the best he could for what remained of the Ottoman Empire, after consultation with his colleagues, asked that England would undertake the whole control of the reforms in Turkey for a term of years. The request was for an English dictator and for British officials for all departments. It amounted to an offer of a virtual protectorate of the whole of the Sultan's dominions. Only after that request, and others less inordinate, had been refused, did the Sublime Porte beg at least for some inspectors for Armenia, basing their demand upon the Cyprus Convention. The last most moderate request was granted, as they all believed; it was refused months later because Russia and Germany seemed to be approaching an agreement with regard to Turkey. Then once more the Young Turks, repulsed by the one Power whose interests were opposed to a partition of their country, had to revert to the old Hamidian policy of playing off one Power against another. I do not think that they have ever been pro-Germans, with one notable but not very influential exception, save by force of circumstances.

It is indeed remarkable how weak is the pro-German feeling out in Turkey now, considering that Germany has really done some little for the Turks. On two occasions she has prevented naval demonstrations against Turkey—proposed on both occasions, I believe, by Grey—to coerce Turkey into an acceptance of unfair demands, and it is

remarkable how strong is the pro-British feeling, considering the treatment Turkey has received from England. The truth is there was never any general liking for the Germans, who were too obviously playing their own game in Turkey. And the present war has shown the Turks a reason they can understand for England's rather ignominious adherence to Russia, which so long has puzzled them. Germany has increased the burden of their financial obligations cruelly. England had in past days tried to lighten it.

And that brings me to a burning question of the moment—the Capitulations. The Ambassadors of the Entente Powers called lately, as you know, upon the Grand Vizier almost as suppliants. They offered to guarantee the integrity and independence of the Ottoman Empire against all comers, if Turkey gave no active help to Germany. The offer coming from the three was suspect. The private word of England only would have had more weight. And what, after all, did such an offer mean? Turkey had no real independence under the Capitulations which were like a rope being gradually tightened round her throat. The offer, as it was made, meant actually nothing more than that the Triple Entente would stand guard over Turkey as a dog stands guard over a cherished bone. If it meant no more than that, it promised no advantage: obviously the reverse. To test the sincerity of the offer, Turkey has proclaimed her independence. The retort is logical and, I think, amusing. It is in strict accordance with the Turkish proclamation of neutrality, since it hits all Europe equally—Germany and Austria quite as hard as France and Russia. But hardest hit of all will be the little Eastern Christian States who made use of the privileges of their subjects under the Capitulations to irritate and wound the Muslims. The moment is well chosen. No one can do anything that I can see, unless Italy prefers to give up her designs upon Albania for a war with Turkey upon equal terms. England can benefit substantially by Turkey's

mood, if English statesmen have the nous to see it. The Sultan's irâdeh abolishing the Capitulations applies, upon the face of it irâdeh to Egypt. Without that we, should have had years of trouble to get rid of the Capitulations, which have greatly hindered, as you know, our work in Egypt; we could have got rid of them only by slow steps of compromise, with endless haggling. There is one very real advantage for us. And if, openly or not, England can support the Turks in this matter, which they regard as vital to their future welfare, she will deal a blow at the influence of Germany from which that influence will never recover. But England must dissociate herself in this from Russia, or Turks will not believe a word she says.

Foreign residents in Turkey have something to fear in the department of justice, but only, I believe, at first. The Shari'at (the sacred law of El-Islam) is only in name the common law of Turkey at this moment. A vast body of precedent, compromise, and custom, has for years been growing up beside it—even as our civil law and our religious liberties grew up in Europe in the Middle Ages, when we also had our Shari'at. But while the Capitulations are in force, the Muslims could not feel themselves free parties to such compromises. The natural course of evolution was for ever being checked by irritation. When the Muslims feel themselves free agents, they will quickly, in these days of newspapers and education, recognize the absolute necessity of all that body of hitherto unsanctioned law which I have mentioned. The end of the Capitulations will at the same time give the central government new strength and new authority to stop disorders. We must understand that the Porte is not abolishing consular protection, that it is perfectly aware that at the present moment, in spite of all the really splendid work that has been done in that department since the revolution, justice is far from perfect in the Turkish Empire. They are prepared to make special agreements—of a temporary nature—with the various Powers for the protection of their "nationals" in a given

district, or throughout the Empire; indeed, they are prepared to entertain any proposal that does not touch their independence. It is only the system, peculiar to the Ottoman Empire, which had to go. It was either that or Turkey. They have diagnosed the case correctly, and have seen the only remedy—a risky one, perhaps, but it was that or death. Vested interests, we know, are very sacred, but the life of nations surely has a higher claim.

The Turks have this great weakness, they are most abominably proud, and are apt to treat the other races in the empire, Muslims as Christians, very much *de haut en bas*. You could hardly conceive the trouble in Constantinople in in February and March, 1913, to get the average Turk to recognize that the feelings and opinions of their Arab subjects might be worth considering, or that the Arab question was of much importance. I am speaking of the rank and file. In high official circles there was much less difficulty, and Mahmud Shevket Pasha, Khalil Bey, and Kheyri Bey (the present Sheykh ul Islām), to name but three, were already quite alive to the importance of the Arab grievances, and anxious to redress them. The danger of the Arab question then and now is this: For many years there has been preached in Syria, Mesopotamia, and throughout Arabia the gospel of an Arab Empire under the Khedive. The Egyptians by themselves are much too peaceable and self-indulgent ever to be able to throw off the English yoke. But if a multitude of warlike Arabs could be brought under that yoke, to share its gall and its good discipline for a while, in a few years European rule would cease in Western Asia and North Africa. The Khedive is really very clever. He has managed to get favour for his propaganda even in official circles here in England. I have heard prominent politicians talk with equanimity of dividing Turkey, and transferring the Caliphate to Mecca. That is the whole scheme. It has been more or less the project of all the pashas of Egypt since Mehemed Ali. As I desire the progress of the human

race, and as I have a sentimental feeling for the British Empire, that scheme does not arride me in the least. The mentality of the Turks and Arabs is quite different. All the progressive notions which the latter have assimilated have come to them, not direct from Europe, but by way of Turkey. Much as I love the Arabs, I should regard it as a great disaster to the causes of religious toleration and of human progress if the Turks should lose the headship of the Muslim world. Well, the Young Turks have done something for the Arabs. The law of the vilayets, drawn up while I was in Constantinople, provides for a fair measure of autonomy for them and all the other subject races, and for the enlargement of that autonomy in times to come. And the Arabs have been much consulted lately, which shows that law is being sensibly interpreted.

There is another matter which I want to say a word about—the question of the islands. The attempt at compromise at Bukarest has failed. The Turks, as I have already said, are abominably proud of their position as a race of conquerors, and always treat the Greeks as inferiors; and the Greeks, puffed up by their successes in the Balkan War, imagine they can claim the universe. It is manifestly impossible for the Turks, for strategic reasons, tamely to relinquish islands which command the port of Smyrna and the Gulf of Aivali. The award of those islands by the Powers to Greece is really hard on them. On the other hand, ethnologically speaking, the islands in question may be marked as Greek, and it is hard, we must suppose, for Greeks to bear the yoke, however light, of Muslims. The Porte has offered autonomy to those islands under a Christian governor appointed by the Sultan only, not, as in the case of the Lebanon, by the Sultan subject to the veto of the Powers. The reason is that it wishes to avoid anomalous régimes, of which it has too many on its hands already. The Greeks insist upon retaining some hold upon the islands in question. A close alliance between Greece and Turkey, both menaced by pan-Slavism, would have

been quite natural but for the late Balkan War, and the inordinate dilation of the Great Idea consequent upon Greek victories, the unusual touchiness of Ottoman pride consequent on Turkish losses. Such an alliance would have settled the whole business naturally. But at present it is difficult to see a way out of the deadlock save by war. I think it possible that the abolition of the Capitulations will simplify the problem greatly, by causing the Greek agitation to depart in haste from Turkey. Greece has used the Capitulations without mercy for political ends. It is also possible that Turkey would reduce her claim upon the islands if Greece accepted her action in the matter of the Capitulations. But Turkey must have some strategic hold upon the islands, or Greece will one day raid the coast of Asia Minor. It is possible that she would admit a Greek official to each island in the same position as the Cadi holds in Tripoli. Further than that she cannot venture in concessions, having regard to public opinion, which is much excited on the subject. If Turkey goes to war, it will be entirely on her own affairs, and not upon behalf of Germany. That, at least, is my conviction.

But suppose that the matter of the Capitulations, which Turkey makes the price of her neutrality, were to be so handled by the Entente Powers that Turkey should be practically driven to take part with Germany. The case does not seem likely, but it is just possible. I gather, by the minatory accents of the English Press, when viewing that contingency some days ago, that we should then give Russia a free hand with Turkey. Oh, the folly of some people! We could better afford to let Germany have Belgium and Holland, aye, and to give her Nigeria and the Gold Coast into the bargain, than we can afford to see Turkey wiped out of existence. This is not the last great war which we shall have to wage, and a great Power holding—even though it were by deputy—Constantinople and the Dardanelles would very soon become too strong for us. As for making Constantinople international, as has

been proposed, we have lately seen the worth in war of mere neutrality. No great but a sufficient power is what we need upon the Dardanelles and Bosphorus, and Turkey, freed from the Capitulations, once more strong within her narrowed limits, answers our requirements better than any other Power that one can see. Even if she fought with Russia on behalf of Germany, we should do wisely in our own interests still to guarantee her integrity and independence. Any further depredations upon Turkey involve more formidable shifting of world-powers even than this present awful struggle. And Turkey at this moment looks to England. On Saturday last, when the news of her proclamation of independence was in all the papers, a well-known Turk—and not a Young Turk either—said to me with flashing eyes: "Let England help us now, and when you have your next great war, which we can all see coming, we will throw into the field a million men, every one of whom will gladly die for you, with praise to God." I verily believe they would.

THE INDIAN MYTH OF "CHURNING THE OCEAN" INTERPRETED: AN IMPORTANT NEW CHAPTER IN ARYAN PRE-HISTORY

BY L. A. WADDELL, C.B., C.I.E., LL.D.

THE ancient Indian myth of the "Churning of the Ocean" by the Gods in order to obtain the Elixir of Life and Immortality, which forms a striking episode in both of the great Indian epics and in later Brahmanist literature as well, is generally regarded as the mere fanciful and arbitrary products of the grotesque imagination of Brahmanical bards, and wanting in any obvious meaning. No one appears even to have seriously regarded it as of possible cosmic significance, except Kuhn and Senart; the former seeing in the products of the churning merely different manifestations of cosmic fire or lightning, and the latter "the synonymy of the gem and the trident."

Now, however, on re-examining this classic myth, I have discovered that it is of *far-reaching ethnic and historical importance, and that it discloses an important new chapter in proto-Aryan history*. It is obviously a *vestige of the prehistoric Aryan period, preserving an archaic philosophic view of the Creation of the Universe from Chaos*, and it clearly dates back to the proto-Aryan period—that is to say, before the dispersion not only of the Indian from the Aryan, but before the emergence of the European branch of the Aryan race. For the products of the churning are found in the identical

order and form; also in the mythology of Greece and Rome. Its elements, indeed, are now seen to form *the foundation of all the chief forms of Aryan religious myth, European, Persian, and Indian.*

But the greatest significance of this discovery is that it *brings the proto-Aryan civilization into direct contact with the source of the earliest culture of the world,** as the elements in question are clearly traceable to Babylonian cosmogony, after it had been given an astrological basis. Its fresh light also enables us to co-ordinate and explain many important points hitherto irreconcilable in the mythology of the three great branches of our Aryan race—the Armeno-Iranian, Indian, and the early Greco-Teutonic.

The metaphor of "churning" appears to me to be manifestly the outcome of an attempt by a primitive people in the pastoral stage of society to explain the evolution of the solid bodies of organic Nature from the amorphous fluid of the Primeval Waters, by the homely mechanical means best known to the people for extracting solids from a liquid.

PRE-VEDIC ORIGIN OF THE CHURNING MYTH

The churning episode is frankly an event of the pre-Vedic and pre-Brahmanical period, because it is performed through the agency of the *Asuras* (the *Uranidai* of the Greek)—that is to say, the Aryan gods, of whom *Ahura Mazda* (*Varuna*, the Greek *Uranos*) was chief, and therefore at a period before the separation of the Indian from the Iranian stock—i.e., anterior to $\pm 1400-1200$ B.C.

The *essential* agents in the churning are, I find, only two—namely, the primeval Serpent of the Deep, "The Infinite or Eternal One" (*Ananta* or *Vāsuki*)† on the one hand,

* That is, if we accept the view now gaining ground that the Egyptian culture was derived from the Babylonian.

† *Vāsu*="jewel"+*ka*, "head," is the usual etymology of this serpent-deity of treasure (Wilson, *Sansk. Dict.*, 184, 781); but I would suggest as a possible equation *Var*, to abide+*ka*, water.

and the Asuras who held the head of the serpent in using the latter as the churning-rod on the other. In all the various versions of the episode, in the epics and *Purāṇas*, none of the Brahmanical gods take any effective part whatever in the process of extracting the "Treasures" of the Deep—that is, the objects which were created.

The Brahmanical gods are altogether superfluous to theme, and are confessedly powerless to extract a single treasure.* Even the supreme Brahmanist gods *Nārāyaṇa* and *Brahmā* take no part in the actual operation. *Brahmā* (who was not certainly evolved as a god in the latest Vedic period—i.e., about 500 B.C.) merely acts as a messenger to *Nārāyaṇa*, who in turn asks the serpent *Ananta* or *Vāsuki* to do the work. Though to save the dignity of the new Brahmanist gods, whose existence at that period is a transparent anachronism, the Brahman bards made "the Asuras hold *Vāsuki* (i.e., *Ananta*) by the head and the gods by the tail, and *Ananta*, who was for *Nārāyaṇa*, at intervals raised his snake's head and suddenly lowered it."† The concluding part of this sentence reads as if the serpent *Ananta* performed the churning independently, without the aid even of the Asuras.

AGREEMENT WITH THE BABYLONIAN CREATION-MYTH

The conditions above noted are virtually in absolute agreement with the earliest Babylonian cosmogony of about 3000 B.C., as recorded in the famous tablets. According to this, in the beginning, before the earth appeared, there existed from eternity only the primeval waters, the spirit of which in the form of "the old serpent" or dragon of Chaos was the great solitary Monad, or First Great Cause. Though latterly the Absolute was represented as a dualism,

* After ineffectual efforts, "the gods appeared before the boon-granting *Brahmā* seated on his seat, and said: 'Sir, we are spent; we have not strength left to churn further. Ambrosia has not yet arisen'" (*Mahābhārata*, i. 1143; cf. also Roy's translation, i. 80).

† *Mahābhārata*, i. 1124-25; cf. Roy's translation, i. 80.

in which the old serpent of the waters is coeval or co-existent with the Lord-of-Heaven-to-be, *Anu* (or *Anos*, whom I identify with *Our-anos*, the *Uru-w-ana* [i.e., *Varuna*] of Ur of Chaldea and of the Aryan Hittite inscription of 1400 B.C. of *Boghaz-kui*); and these two are the prototypes of the Iranian *Ahura-Mazda* and *Ahriman*.

The old serpent of the deep or universal mother was called by the Babylonians "*Mummu Tiawath*" (i.e. = Greek *Thalasa*, or "the Sea") and brought forth everything. At first she begat the god of the sky *Anu*, directly or in two or three generations. After *Anu* came *Bel*, "the lord," and *Ea* (or *Aa*, the "god," as opposed to the Serpent of the Deep and also the lord of Deep Wisdom, and his son was *Merodach*, who became the champion of the gods, and latterly the divine creator.

Then in the dissensions which arose between the gods and the serpent brood of dragon spirits, Merodach kills the old serpent and stretches half her body on high to form the sky, with mansions for *Anu* and the other great gods, and thereon Merodach assumed the functions of creator for the rest of the universe. He set the moon on high and arranged its mutations, and he created man "with his own blood." This pantheistic conception of the origin of man is analogous to that taught by Brahmans in their theory that man was fashioned from a part of the body of the creator (*prajāpati*) *Nārāyana-Viṣṇu*.

It is the creation of the universe from the primeval waters by The Old Serpent and by *Anu* through his grandson Merodach, which clearly forms the story of the Churning of the Ocean of the Hindu myth, and it is, of course, a version of the same which we find in the first chapter of Genesis, derived by the Jews from pre-Semitic Chaldea.*

* T. Pinches, *Religion Babylonia*, 1906, 30 f., from which the above account is mostly summarized.

(To be continued.)

SUPPLEMENT

OUR REVIEW OF BOOKS

1. AN INDIAN RULER ON ENGLAND. Impressions of British life and character, on the occasion of a European tour, 1913. By Meherban Narayan Babasaheb, Chief of Ichalkaranji (Bombay Presidency). With an Introduction by the Right Hon. Lord George Hamilton, G.C.S.I. (*Macmillan and Co.* 1914.)

The chief of Ichalkaranji is a high-caste Mahratta Brahmin, and has proved himself to be not only a successful ruler of his own State, but a high authority on agricultural and other problems of Indian administration. For the last fourteen years he has been representing the Sirdars of the Deccan in the Bombay Legislative Council. He is no stranger to our readers, having contributed to our number of October, 1913, a notable article on "What has Britain done for India?" and to that of January, 1914, "A Plea for the Mahratta Brahmin." He writes excellent idiomatic English, and records his impressions with vividness and much insight. Whether the topic be the scenery of Ben Cruachan or the waters of Bath, the British party system, or the London clubs, the breeding of cattle, or the question of water supply, he has always some shrewd and sensible observation to make. He strongly objects to our glazed collars and tight boots, as well as to low-cut blouses, hobble-skirts, and slit dresses, and he devotes a whole chapter to the London policeman, for whom, like all visitors to our shores, he has the most unbounded admiration. It is very striking to observe how fully the Chief has grasped the practical working of the most complicated institutions of English life. He appears to understand thoroughly and in detail, and to examine with thoughtful criticism the practice of Parliamentary Government, the Poor Law system, public health services, and the whole scheme of English education; and we have seldom seen any statement so concise and accurate as his account of the differences between the Church of England and the other Christian communities. Very impressive are the views of this Indian ruler on *religious*

education. "No nation can hope to prosper without a strong moral code based on sound firm religious principles" (p. 220). He disapproves of the avowed neutrality of the Indian Government, which has led to the absence of the religious element from the system of education; and he urges that as religious education in the various faiths of India cannot be obtained by individual private effort, the Government should "make religious instruction a more or less recognized part of the curriculum of education." In his final chapter, "Britain and India," he expresses a strong desire to give Indians a fuller share in administrative affairs, so as to enable them to become self-reliant, as otherwise, in the event of the strong arm of Britain being unhappily removed, the country would fall into the hands of some other nation or into anarchy, as happened when the Romans withdrew from Britain. This suggestive book should be read by all who are interested in India.

W. W. CANNON.

A LANDMARK IN HISTORY: THIRTY YEARS ANGLO-FRENCH REMINISCENCES, 1876-1906. By Sir Thomas Barclay. (*Constable and Co.*) Price 12s. 6d. net.

The British public is accustomed to having books dealing with Paris reminiscences doled out to them at the rate of about two a year. Some are distinctly witty, such as, for instance, that of Robert Sherard; others instructive, such as that of Laurence Jerrold. We have seen none which is so important, or bears such an unmistakable stamp of authority, as that before us now by the maker of the *Entente Cordiale*. Moreover, it has an especial interest now that his labour of years has borne such unmistakable fruit. This is something more than personal reminiscences. However entertaining, it is a chapter of diplomatic history.

The *Entente Cordiale* was, from its start, an instrument of peace in Europe, designed to clear away all misunderstanding between England and France. The difficulties arising from the rival interests of the two countries in Egypt and elsewhere were settled by the Anglo-French Arbitration Treaty. His chief difficulty appears to have been with a party which, opposed to the reawakening of the old lust for *revanche* against Germany, endeavoured to draw public attention back to colonial expansion. It was this policy, the more immediate purpose of which was to divert French attention from matters irritating to Germany, which revived trouble with England. The author cites, to take one example, the action of France in Siam in 1893, an incident which, as he explains, was not unlike the Agadir incident. In view of the anti-European effervescence in that quarter, the British Government sent gunboats for the protection of British subjects. This action on the part of England excited the greatest indignation in Paris, and France thereupon, and at once, strengthened her naval forces. In the next chapter, Sir Thomas describes how Lord Dufferin suggested to M. Honotaux that the two Foreign Offices should try to bring about a general settlement of all pending difficulties with the Egyptian Question as the centre point. They were ably assisted by Mr. Phipps and M. Haussmann, who met frequently, and drew up a scheme of settlement which, however, has never

been revealed to the public. These hopes were, however, shattered by what Sir Thomas aptly describes as "the patriotade wave," and the Dreyfus affair, which excited so much feeling in England. This was, of course, followed by the Fashoda incident.

It was as President of the British Chamber of Commerce in Paris that Sir Thomas Barclay, by an appeal to the common sense of the two nations, steadily prepared the foundations for better understanding. He explains that the Boer War marked the dawn of a better feeling. He quotes the *Figaro* in which M. Cornély, after extolling the calm and Christian spirit in which the Boers defended their country, wrote:

"On their side the English teach us how a great people bear reverses, how it considers itself responsible to the world to stand by its Government whether in good fortune or misfortune. . . . Sensible men must have sympathy for both Boers and English. . . . The English are an example for us."

It is pleasant to think that it was thus at a dark moment in English history that the turning-point was reached, and France once more began to sympathize with her friend across the Channel. The death of Queen Victoria in the following January struck a sympathetic cord in the generous nature of the French. Sir Thomas Barclay set to work and drew out a scheme which appears on p. 195, and of which we give the following summary:

1. Work first on the Franco-Scottish tradition. Form a Franco-Scottish Society based on the historic relations between France and Scotland. Visits to be exchanged between the Scotch and French. Opportunities to be utilized of drawing the English into the work.

2. Conflicts of interest cannot be solved while bad feeling exists, but might easily be solved if the two peoples were friendly.

3. To produce a better feeling, point out—(a) England best customer of France; (b) a certain esteem in both countries for individual persons of the other; (c) familiarity with and admiration for each other's literature; (d) increasing interest of Frenchmen in English sports.

4. Necessity of proceeding without exciting opposition or jealousy of authorities.

5. Most useful agencies: (a) Chambers of Commerce in England and France; (b) Municipal Councils in France; (c) Trade Unions in England; (d) Leading politicians; (e) Special Committees.

6. Method: Articles in periodicals; interviews in newspapers; public addresses.

This was his scheme, this is what led him to victory. With indefatigable energy he took up his task. Its success was assured from the first, it is now applauded by all. He deserves the unstinted praise of his countrymen, with whose universal compliance he may well write: "Exegi monumentum aere perennius."

We have before us the second number of a new publication, "The Crucible," described on the cover as "A Social and Literary Review for

Cosmopolitans." The editor is Ramdas Crishna. The verse is of the somewhat advanced erotic type proclaiming the minor poet, but there is a good paper on "Modern Education in India," and a long review on Edward Carpenter's "Love's Coming of Age."

"The Anti-Christ in Egypt" is the title of a book by W. N. Willis, written to show the protection afforded to criminals of various nationalities by the Capitulation Laws. It is full of praise for the work done by Lord Kitchener. We may quote: "Disorder reigned everywhere when Lord Kitchener arrived in Egypt. The wildest prophecies were now sent throughout the land as to Kitchener's real mission. The iron hand was depicted without any 'velvet glove'—a rule of brute force by the man of blood and iron was foretold. . . . Lord Kitchener did nothing but sit tight and firm in his seat of authority. The doors of the Residency were thrown open so that all manner of men might enter and lay bare their grievances. Gradually people began to understand that there was no iron hand, and that the necessity for the velvet glove did not exist."

CORRESPONDENCE

"A FAIR HEARING AND NO FAVOUR"

MR. NOEL BUXTON AND ARMENIA—A REPLY

TO THE EDITOR OF THE "ASIATIC REVIEW"

DEAR SIR,

I must confess to my great surprise at reading the letter on the above subject, signed Isidor Morse, which appeared in your issue of August 15.

I sent the Review and a copy of "Travel and Politics in Armenia" to an old traveller well versed in the politics of the East—one who has visited and lived in Armenia—and as I found his greater knowledge led him to form the same judgment as to the value of Mr. Morse's criticism as that to which my own slighter knowledge had led me, I have no hesitation in asking you to insert the substance of my friend's communication on the subject. As his views and my own, arrived at independently, happen to coincide, I shall summarize them for the sake of brevity.

He knew Mr. Noel Buxton's book by name only, but studied it carefully after reading Mr. Morse's criticism.

Mr. Morse stigmatizes Mr. Noel Buxton's work as "the product of a rather irrational enthusiast," and denies that it adds to one's knowledge of one of the vital questions of Eastern politics.

I find nothing in Mr. Buxton's work but a clear-headed narration of facts, as seen by an eye-witness, from which are drawn the only conclusions possible to a sane and balanced mind.

Take, for instance, the question of arms. Mr. Buxton, having seen the lawless, half-savage Kurd armed to the teeth while his Armenian victim is utterly defenceless, begs that the latter should be armed for the purpose of self-defence. If the Government is unable to control the wild Kurds and to protect the Armenians from massacre and outrage, can anyone propose a more rational policy than this? And all Mr. Buxton's proposals are on a level with it.

Many of Mr. Morse's comments are too trifling to notice, such as "the illustrations are neither characteristic nor interesting," that the descriptions are tiresome and valueless to anyone "accustomed to the East," and so on. These are matters of individual opinion, and so of only relative value. Personally, I find the reverse to be the case.

The authors have not written the book for those "accustomed to the East." Those who know the East have little need of such works, which, however, are of the most essential value to those who are not acquainted with the East. For such persons narratives giving faithful first-hand pictures, as does Mr. Buxton's book, are simply indispensable. The friend mentioned at the beginning of this letter, who is an expert in Eastern politics and well acquainted with Armenia and its people, wrote to me that he found the book both interesting and accurate.

When one comes to more serious points, the criticisms are most false and misleading, even ridiculous to those who have any knowledge of the Kurds and Armenians.

He admits that the Kurds often steal sheep and commit murder, "but," he adds, "so do the Armenians."

This is a gratuitous and wicked addition which no one who has lived in the country will confirm. The expert referred to above has lived many years in Armenia, and never found the Armenians busy cattle-lifting and murdering. Of course individual cases occur there, as in all parts of the world. Mr. Morse needs only to visit the Turkish courts of justice to convince him of his error. Failing that,

let him read the reports of the British Consuls in that country, published in the Blue Books. This will prove to him the utter injustice of his accusation.

The *naïveté* of the critic is seen in his attempts to refute Mr. Buxton's assertions as to Kurdish lawlessness by saying "it will not be accepted by those of us who have often travelled with perfect safety and comfort under the ægis of the Turkish Government." Mr. Morse forgets that he is a foreigner and a Briton, and that foreigners are comparatively safe in Turkey, especially when escorted by half a dozen gendarmes.

The question is, whether the natives, the Armenians, are safe; whether they are not often robbed and murdered on the roads while the robbers and murderers are allowed by the authorities to go scot free, ready for the perpetration of further excesses. Again, if travelling in Turkey is so safe and comfortable, why do foreigners and natives go to the expense of an armed escort?

The criticisms on the main points at issue seem to emanate from something very like personal animus against the authors and the people whose cause they are pleading. For instance, as to the question of Armenia being handed over to Russia, Mr. Morse asks whether the authors are sure "the Russian Government cares to take charge of some million of petty shopkeepers." If Mr. Morse, as an Englishman, does not blush when he re-reads these criticisms he is past praying for. He practically glorifies robbery and murder as a means of livelihood and vilifies trade and commerce.

The history of the last Turco-Russian War is the reply to that query. Then, Russia, not only *wanted*, but actually annexed, a great part of Armenia, and it was England who drove Russia out of Erzeroum. Furthermore, by the San Stephano Treaty, Russia had taken the whole of Armenia under her protection. And it is owing to British intervention that she was obliged to give it up. Hence England's responsibility for Armenia's present

plight ; hence why Mr. Morse, as an Englishman, should have kept silent rather than put such a question.

Mr. Morse thinks Mr. Buxton's argument as to why the Armenians are looking to Russia for an amelioration of their condition is not convincing. Those readers of Mr. Buxton's volume whom I have met agree with me that his reasoning is sound. His premises are these :

He, as an impartial traveller, has seen Armenia devastated and desolated by the Kurds, for lack of proper protection and administrative reform on the part of the Turks. He proposes to the Turkish authorities, that they should allow the Armenians to arm themselves as a means of defence against their marauding neighbours. He believes the Armenians are capable of protecting themselves, and that the Kurds, perceiving this, will at once change their conduct and keep at a respectful distance, and that the relations between the two peoples will be immensely improved, to their mutual advantage. But, argues Mr. Buxton, if the Turkish Government cannot, or will not, protect the Armenians or disarm the Kurd, or allow the Armenian to arm himself, for the protection of his life, his family, his possessions, then, but two alternatives remain :

(1) To place the Armenian under direct control of the Great Powers. (Note : Mr. Buxton's book appeared before the outbreak of the European War.)

(2) To turn to Russia for the protection, denied alike by the Ottoman Government and the European Powers.

What can be more reasonable, more conclusive ? And, moreover, Mr. Buxton gives his reason for arriving at the above convictions. He has visited Russian Armenia and found the Armenians there, comparatively happy and prosperous. Where, then, lies the objection to such a course being taken, when all else has failed ?

Among my numerous Armenian friends in England, France, Egypt, the Balkans and Turkey, I have not found one dissentient from the above conclusions. Much as they would prefer to live under a properly administered Ottoman

Government, they have lost all hope of any spontaneous amelioration of their conditions under Turkish rule. And rather than continue to drag out a miserable existence in the *inferno* created by Turkish misrule and Kurdish lawlessness, they would prefer to accept the protection offered by the Russian Government. And who can say that they are not fully justified in so doing?

Yours faithfully,

FELICIA R. SCATCHERD.

14, PARK SQUARE, N.W.

"INDIA AND THE EMPIRE"*

TO THE EDITOR OF THE "ASIATIC REVIEW"

DEAR SIR,

In the preface to this her last little volume, Mrs. Besant speaks bitterly (and apparently with good reason) of the refusal by the *Times* to publish her reply to various criticisms of her letter; but, unfortunately, the practice of boycotting what they do not like is characteristic of newspapers nowadays, and I have precisely the same complaint to make of the *Christian Commonwealth* which was so friendly to her, not only in laying her facts before the public, but in refusing publication of any correction of those facts. Since the *Echo* died of "hearing both sides," there is no daily paper, so far as I know, which makes a point of doing so, and our only hope is in the *Asiatic Review*, which, unfortunately, is not likely to reach the same body of readers.

Not only did the editor of the *Christian Commonwealth* refuse to publish my perfectly civil comments on Mrs. Besant's letter, but he did not, as far as I remember, return my letter or reply to a subsequent letter, in which I asked to be informed what had become of it, or even acknowledge

* By Annie Besant (I.P.S., 161, New Bond Street. 1914. Price 6d. net).

the receipt of a small volume entitled "Truths about India," which would certainly have enlightened him (and Mrs. Besant) on many matters of which they are apparently ignorant.

It is wearisome to have to repeat the same corrections of such common misleading statements as abound in Mrs. Besant's letter and subsequent lecture on "India's Plea for Justice," but when such a generally well-informed authority (as she certainly is) repeats such statements without any reference to the repeated corrections that have appeared in a book of such undoubted authority as that quoted above, one can hardly be surprised at finding the same policy of ignoring the case on the other side being pursued by less scrupulous critics.

At the risk of wearying your readers, I am compelled to deal with some of Mrs. Besant's most misleading statements *seriatim*, and, unfortunately, it is impossible to be as brief as one would naturally wish to be; but I shall confine myself to the worst examples of her system, which, speaking generally, is to magnify the merits of our Indian fellow-subjects and depreciate those of her own countrymen.

She speaks (on p. 13) of "the splendid achievements of the Mahratta power" without specifying any of them; and no doubt the Mahrattas showed at one time great capacity for upsetting the existing Government; but whether their achievements could properly be described as "splendid" is open to doubt; and their proceedings were hardly consistent with that stable and secure "civilization" which, (on the same page,) she says "existed in India when the East India Company turned their attention to that country." Now it so happens that the Mahrattas, as a nation, were practically contemporaneous with the East India Company; and it was not till they had been finally subdued, (in 1818,) that the English can be said to have been in any real sense responsible for the government of India outside the Punjab. Up to that time the mere existence of the Mahrattas as a sovereign power is quite

sufficient to prove that, ("as every schoolboy knows"), there was no "stable and secure civilization" in India at the time the English were first attracted thither. That is merely history.

But Mrs. Besant is perhaps most mischievous in the region of economics. On the very next page (14) she says that "the *unrestrained* export of her foodstuffs *due to the railways* caused *far more numerous and more widely-spread famines** than did the occasional destruction of crops by war in a restricted locality." If this extraordinary sentence has any real meaning, it must mean that railways by facilitating the transport of produce have actually caused "famines," and that "famines" in olden times were only caused "by the destruction of crops in war time," and were quite local disasters. It is almost impossible that Mrs. Besant, or any intelligent human being, can really believe any of these statements, but these are her words published to all the world by the editor of the *Christian Commonwealth* without a word of protest. Does Mrs. Besant think it is better that crops should rot on the ground for want of roads or access to a good market, as used to be the case even in my time in the Central Provinces, than to have all the markets of the world brought to their very door? Then, again, would Mrs. Besant try to regulate the export of surplus foodstuffs? and, if so, who is to decide how much of the surplus of each ryot is to be exported? It is no doubt true, (and this is probably what Mrs. Besant really meant by her too rhetorical language), that many of the poorer cultivators in poor countries like India and Russia are driven to export more of their produce than is good for their own stomachs; but would Mrs. Besant prevent them from selling it, and *make* them eat it themselves?

As to famines, I must refer her to Chaps. XI., XVI., XIX., XXIII., XXIV., XXV., and XXXI., of "Truths about India." Did she never hear of the frightful "depopulation" that occurred in the Mahratta country in the

* The italics are mine.

year A.D. 1400, long before there were any British with their ruinous railways? It is worthy of note in passing that in that same Mahratta country there was "a great decrease of population in the seventeenth and eighteenth centuries owing to war and devastation," and that it is only "under British rule in the nineteenth century" that it has "increased greatly" ("Encyclopædia Britannica," vol. xv., p. 289, ninth edition). But, says Mrs. Besant, "the broad fact remains that India *was* rich, and is poor." Now, I wonder what this sentence really means? Mrs. Besant vouchsafes no proof of either assertion, and it does not appear exactly either *when* India was rich, or what is meant by "India" in this connexion. Does it mean the King or the people? And if the people, which part of them? The "actual cultivator" in the good old times was, of course, to all intents and purposes a slave, and till long after our time was only a serf, *adscriptus glebæ*. Does Mrs. Besant mean that *he* was "rich"? He certainly formed the bulk of the population of India, as he does still, and he is no doubt poor now, though I doubt if his poverty is harder to bear than the poverty of our "submerged tenth," especially in winter. Poverty, after all, is a comparative term, and, as my friend "J.P." observed in the last number of this *Review*, I too would rather live on a penny a day in the Mofussil of India than a shilling a day in most parts of England. It is, perhaps, true that India generally, including the "actual cultivators," was a more comfortable place to live in during the Middle Ages than was England; but it is by no means so certain as Mrs. Besant seems to think. And it must not be forgotten that, though they may have had more to eat in ordinary times, yet in the numerous and ghastly famines of which we have abundant evidence no attempt was ever made to save life because, for want of railways and other means of communication, no such attempt was possible; so that people died of starvation within a few hundred miles of food to which there was means of access.

On p. 16 Mrs. Besant assures us that India once "believed, but now disbelieves, in England's love of liberty"; but "liberty," again, is a comparative term, and it is clear now, if it was not when Mrs. Besant wrote her letter, that the people of India, so far as they are articulate, much prefer the liberty they enjoy under the rule of Great Britain, to the sort of liberty they might expect from the Kaiser or even our good ally the Czar. Mrs. Besant, indeed, says herself (on p. 19) that India is "enthusiastically loyal to the Crown," which is more than I should have ventured to say, though it really seems now as if it was literally true. She is not ashamed to repeat the calumny as to the alleged breach of faith by the English Government in the matter of the royal proclamation in 1858—"the utter disregard of the promises made in 1858," as she puts it. And yet the case for the Government is as simple as possible, and the meaning of the language equally clear from any reasonable consideration of what those concerned in it said at the time. It must, of course, be admitted at once that natives of India have not yet been admitted "freely and impartially" to every office under the Government of India. They are not admitted to Sandhurst or Woolwich, or even to the English-recruited branch of the Indian Police, (to say nothing of the Navy); their exclusion in such cases being governed, I suppose, by the much-discussed clause, "so far as may be," and also by the idea that they are not qualified for such appointments by "education, ability, or integrity"—or, rather, that such qualifications only are not sufficient to justify their appointment to such offices. It is also not *exactly* true that they are excluded on account of their caste, colour, or religion; it is not "by reason *only* of his religion, place of birth, descent, colour, or any of them, that the native of India is debarred from holding any place, office, or employment" in India; there are many other considerations which have deterred the Government of India so far from employing the nobles and gentry of India in the army, for example. And though personally

I think the decision is entirely wrong, and that the late Lord Minto's scheme for their employment ought to have been fairly considered, and, if possible, tried, I can quite understand the obstacles in the way of its adoption. I take this opportunity of protesting once more against the assumption that we who lay stress on the words "so far as may be" are actuated by a "pettifogging" spirit. We only look at the proclamation from a common-sense point of view, and insist that the proviso was not only carefully considered by those who drafted it, but actually indispensable.

The fact that the Civil Service, at any rate, has been open to every British subject for more than fifty years, and that a sufficient number of Indians come to England every year to fill every vacancy, is always carefully ignored by our critics. There are many reasons why so comparatively few compete, but it wouldn't suit Mrs. Besant's argument to state them. The truth is that considerable progress has been made in the matter of associating Indians and Europeans in the government of the country, and though many of us think it might well have been more rapid, most people who know the country, including, I have no doubt, Mr. Gokhale himself, know quite well that it will be many years before the Government can be carried on without a strong backing of Europeans. What that backing must be is a question for those in authority from time to time.

I have already taken up too much of your space, and must leave "India's Plea for Justice" for another occasion.

J. B. PENNINGTON.

INDIA AS A PARTNER IN THE EMPIRE

TO THE EDITOR OF THE "ASIATIC REVIEW"

SIR,

We shall be most grateful to you if you will assist us to bring forward the work of the Imperial Organization Society, which is to bring India into the great federation of

the Empire, and allow her a voice in the great Imperial Parliament, which it is our object to establish. We advocate an Imperial Constitution, which would mean an Imperial Parliament for Imperial affairs, such as defence and foreign policy, and local Parliaments for local legislation. If India was not quite ready for the latter, she would be ready for the former, and her voice would be an untold strength. The movement would be a very popular one, as India has a strong backing in this country, and her loyalty has brought forth admiration on every side. We should like India to organize thoroughly for this movement, and educate her public, both in India and all parts of the world. The day has gone by when India may be left in a subordinate position, and it is time for her to be taken into the Councils of the State. Committees throughout India ought to be formed, and a strong organization set on foot. The executive of this society will be grateful for advice and co-operation to this end.

Yours faithfully,

W. PHILLPOTTS WILLIAMS,

Chairman of Committee.

THE INDIAN PRESS AND THE WAR

WITHOUT an exception the entire Indian Press has, as it were with one voice, signalized its unswerving loyalty to the British cause. It is in truth a trumpet blast of death to Germany, and, we may add, to those Teutons in particular who reckoned that England's distress was India's opportunity. The cumbrous machinery of their news-faking factory has failed to do its work.

We herewith give extracts from some of the leading Indian organs. We apologize for the incompleteness of this list; we applaud the completeness of their loyalty:

"THE LOYALTY OF INDIA.

"The splendid loyalty of India has by this time been proclaimed throughout the British Empire, and will be everywhere hailed as a demonstration of the sincere attachment of the educated classes to the country which, in the happy phrase of the Maharaja of Burdwan, has done so much towards the rebuilding of Indian prosperity. It is not that the fidelity of India to the British Crown has been in doubt, but that, as Mr. Chakravarti observed in his telling speech, there are occasions when a formal and public avowal of loyalty and devotion is of the highest importance. Not only does it emphasize mutual confidence in India and the British Empire at large, but it serves to inform foreign nations which have indulged in malignant speculations on the attitude of the great countries which form the King's

over-seas dominions that their views are ill-advised and wholly unfounded. Nor is this all. The public opinion of India must count in making up the world's verdict upon this the most tremendous struggle in the history of Europe. India is essentially opposed to war. In no country has aggression been more universally condemned or the armed peace of Europe more severely and justly criticized. When, therefore, we find that Indian public men without reserve declare themselves convinced that England has been forced into the present conflict and that she is waging a just war in a just cause, this deliberate pronouncement is not to be lightly esteemed. All those who are seriously concerned with the moral issues of the war will value this emphatic testimony. It may perhaps be desirable to add that in the demonstrations in Calcutta and Bombay there has been no hint, trace, or suspicion of official inspiration. They have been the spontaneous expression of the feelings and opinions of people who set store by their independence of action, and have voluntarily made known, for the benefit of all whom it may concern, that they are willing to make any sacrifice in their power for the maintenance and defence of the British Empire. With this sentiment, we are convinced, no event, however untoward, will be allowed to interfere."

The Statesman, August 20, 1914, leading article.

"Germany is going to be taught a lesson, which she has been in some need of learning for a long time. She has proudly inscribed on a big monument near the Danish (present) frontier, that she fears God and nothing else in the world. She will soon have to climb down and learn by bitter experience that God will not suffer an oppression such as that which Germany has been carrying on during the last fifty years toward those she has conquered. It always brings its own punishment to try to destroy a people's language, religion, and customs, as Prussia has tried to do in Poland, Alsace-Lorraine, and Schleswig. Fortunately, she has not succeeded in her efforts; but she has inflicted

horrible sufferings in many ways on those brave people who have succeeded in keeping these invaluable treasures in spite of the pressure of the iron hand of Prussia.

"Though many of the smaller States, for obvious reasons, may have to keep neutral for the present, all know with whom they sympathize—it is not with Germany! Germany's past history and her recent action towards Belgium has clearly shown—for the matter of that, we knew it before—that no State that is not strong enough to defy Germany can ever be safe if Germany retains her present position. No wonder that at the present time there is an outburst of loyalty from the Indian people as never before. I say no wonder, for on the dark background of Germany's actions, England's respect and regard for the religion, customs, and languages of the Indian people come out in wonderfully sharp relief."

J. B., in the *Madras Weekly Mail*, August 20, 1914.

"HELP FROM FRENCH INDIA.

"The Consul-General, Pondicherry, has voted Rs. 10,000 to the French War Relief Fund opened on the initiative of the Minister of the Colonies. The following motion has also been passed: 'That in consideration of the heavy war expenditure the Home Government are called upon to meet, it is the Colony's duty to place all its reserve fund, amounting to something like six lakhs of rupees, at the disposal of the Motherland.' This makes the second instalment from French India towards the war fund."

"The Pondicherry Government has received orders from the Home Department directing them to prohibit merchants from storing away grain and foodstuffs, as well as raising the prices of provisions, and so on."

Times of India, August 29, 1914.

"RANGOON SIKHS AND THE WAR.

"A meeting of Sikhs was held at the Sikh Temple, Rangoon, on Tuesday to consider the present political

situation. Dr. Randhir Singh, who presided, in his opening address dwelt upon the horrible state of affairs in Europe, and appealed to Sikhs, young and old, to come forward and serve the King-Emperor with all their might, in the shape of money, men, and moral support. He said that the English were 'Sikhs.' They were the chosen people referred to by their ninth Guru Teg Bahadur, and hence they were their brothers. They should shed their blood profusely in keeping the honour of the Union Jack intact."

Rangoon Gazette, August 24, 1914.

"We Indians have certain duties to discharge in the presence of this war of unprecedented magnitude. Our first duty, of course, is to assure our rulers of our unswerving loyalty and attachment to the British Throne. But our duty is not exhausted by the mere holding of public meetings and delivery of eloquent speeches. Nothing is easier than to do this. It involves no sacrifice, but, on the contrary, procures self-advertisement free of charge. It is a cheap way of showing one's loyalty while the situation requires heavy sacrifice. No, we have other, and greater duties to perform. Of course it goes without saying that we must all contribute to the Relief Fund which has been inaugurated by His Excellency the Viceroy. We know everyone will do so, and we need not therefore dwell upon this point at any length. The Chiefs have offered the entire resources of their States. We have nothing to do with Chiefs, but with men occupying less exalted positions in life. Our great Zemindars, our no less great professional magnates, our merchants and traders, nay, even our students, will eagerly respond to the Viceroy's appeal, and we have not the slightest misgivings on this point."

Hindoo Patriot, August 24, 1914.

"THE WAR AND BENGAL.

"Yesterday we wrote appealing to our countrymen to enrol themselves as members of the Indian Voluntary Aid

Contingent which is being formed in Calcutta. The credit and honour of our Province is at stake ; and we are confident that it will stand vindicated by the result. The Contingent will not, indeed, be a fighting body, but its mission will be far nobler than that of killing men. It will be exposed to the risk of battle, for its operations will be within the zone of fire ; and it will incur that risk in ministering to the wounded and the dying. It is a noble work of humanity, standing even on a higher plane than ordinary acts of benevolence ; for it is attended with risk to life and demands the exertion of the highest form of courage. The soldier bravely faces the hail of bullets, amid the excitement of battle, but he who is employed in this work of mercy proceeds to his task with a coolness and courage in which the mere physical element of daring is overshadowed by the higher impulse of a self-sacrificing devotion for the benefit of suffering humanity.

Daily Bengalee, August 22, 1914

“ The public meeting convened by the Sheriff in accordance with a numerous signed requisition of the citizens of Madras, was held yesterday evening at the Victoria Town Hall. It was very largely attended, all classes of people, Indians and Europeans, officials as well as non-officials, being present to testify to the unity of spirit and purpose which animated the great gathering. Our esteemed and venerable countryman, Dr. Sir S. Subramania Aiyar, presided on the occasion. In fitting and well-chosen words, he delivered a speech which gave expression to the sentiments and feelings of the vast body of educated Indians throughout the country at the present crisis in the fortunes of the British Empire. ‘ The war is one,’ he observed ‘ which affects the safety of the Empire to which we belong, and is thus one, as it were, touching the person of every man, woman, and child in India.’ It is, therefore, our duty to make such sacrifices as it is in our power to make in order to bring the war to a successful termination, and in order

that its dire consequences may be as little felt as possible by the people in the United Kingdom and in India. There can be no doubt that this is the feeling of every thinking man and woman in India at the present moment and since the outbreak of the war. The mutual tie and the reciprocal bond of sympathy between the people of India and the people and the Throne of Great Britain, are based not merely on sentimental grounds, but on the firmer groundwork of mutual interest. The spontaneous wave of enthusiasm and loyalty on behalf of the established Government which has swept over the country since the war began, and of which the Madras meeting is only a belated manifestation, is sufficient proof that the relation between the Indian people and the great British nation is, as Sir Subramania Aiyar remarked, one of true brotherliness. We are glad that our distinguished countryman took occasion by the hand in giving, as he said, audible expression to what is uppermost in the minds of the most thoughtful and the most devoted of His Majesty's Indian subjects—viz., that 'they will consider nothing a greater privilege than to be allowed to serve their Sovereign as volunteers. They will hold it an honour superior to that of a seat in the Executive Council and even in the Council of the Secretary of State. Their fervent appeal is, 'Trust us,' and that trust we cannot betray, and we shall never betray. It is to be hoped that the spontaneous outburst of loyalty which took place, the very moment the news of war reached India, from one end of the country to the other, will serve at no distant time to that appeal being favourably entertained, and a concession granted, which will raise us in our own estimation, as well as in the eyes of the world at large, while at the same time the concession will prove a source of strength to the Empire which will not be negligible." We hope that these words and sentiments will be given their due weight in the Councils of the Empire. Edmund Burke speaks in one place of the fact that 'the same ways to safety do not present themselves to all men ; nor to the

same men in different tempers. There is a courageous wisdom ; there is also a false, reptile prudence, the result, not of caution, but of fear.' It is needless to point out that the former is always to be preferred to the latter in national affairs. The first Resolution, which was moved appropriately by the respected chairman himself, was to the effect 'that the citizens of Madras, in public meeting assembled, desire to give full and free expression to their profound and unswerving loyalty to H.I.M. King-Emperor, and that, in common with all His Majesty's subjects, they hold the prerogative of British citizenships as their dearest possession, and are ready to do all that lies in their power for the preservation of the Empire.' The Resolution, which was ably seconded and supported by several speakers, was unanimously passed. It may be permissible to point out, in this connection, that the true conception of the prerogative of British citizenship which the Resolution says is our dearest possession, involves in it the right and the duty to bear arms in defence of one's country and King. The second Resolution, which was moved by Mrs. Besant with her usual eloquence, was to form a War Relief Fund, which comprises monies to be devoted to the alleviation of suffering caused by the war, in India, as well as in Great Britain. We feel no doubt that the object aimed at in this Resolution will appeal most forcibly to the humanitarian instincts of the Indian people of all grades of society, and the response to it will be such as is commensurate with their means and resources.

Hindu, Thursday, August 27, 1914.

D. N. SINGH.

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THE ASIATIC REVIEW

NOVEMBER 16, 1914

THE BETRAYAL OF TURKEY.

The entry of Turkey into this already far-flung conflict shows how a small, self-appointed clique, masquerading as the Committee of Union and Progress, has succeeded in plunging their unfortunate country into a ruinous war. We believe that it was only a section of the Committee that could have really favoured this fatal action. The Committee had set itself the very praiseworthy aim of regenerating Turkey, and no true friend of the Ottomans can deny that the old Hamidian régime had had its day. In the accomplishment of their task they committed three distinct blunders. Firstly, in their attempt to awaken a national spirit they made the mistake of trying to manufacture Turks out of their Greek and Bulgarian subjects, who had previously been quite loyal and had been allowed a large measure of liberty. This led on to the success of the Balkan States in the late war. In the second place, by disavowing strong Moslem faith themselves, both in principle and practice, they failed to retain the moral position of Turkey as the supreme Guardian of the Faith. This undermined Turkey's influence among her co-religionists in India, Persia, and the north coast of Africa. Thirdly, instead of insisting on the programme of peace, retrenchment, and reform, which the disorganized state of the country loudly demanded, they allowed their army, which has always been their main support in the country, to

become so thoroughly Prussianized, that Turkey, in effect, rapidly became a vassal of Germany. So the old landmarks of Anglo-Turkish friendship became obliterated, and our traditional policy of Crimean and Disraelian days became reversed. We venture to think that Turkey's power for mischief has been greatly circumscribed by the proclamations of H. H. The Nizam of Hyderabad, H. H. The Aga Khan, and H. H. The Begum of Bhopal, and by the assurances of good faith on the part of the Arab chiefs in Africa. But there is above all this the great Faith of Islam—a Faith which abhors injustice, and inculcates submission to the higher law, and the protection of the weak.

It is only when the Faith is assailed that a Holy War is lawful, and Turkey is well aware that the Allies have no intention whatever of attacking the religion of the Prophet. As pointed out in the *Asiatic Review* by Mahdali,* with regard to the late Balkan War, the Asiatic contingents did not even know what they were fighting for, and when told that they had been sent to save Adrianople, replied that that was not their home. So signally had the Young Turks failed in "inspiring national ideals." But if the Balkan War was unpopular in Turkey, how much more so must that be the case in the present war? The appearance of the *Goeben* and *Breslau* at Constantinople must have caused considerable consternation amongst the Turks themselves, though perhaps not to that particular section of those Young Turks who were in the plot, and have so fundamentally betrayed the interests of Turkey as a nation and Islam as a religion. With the former England has no real quarrel; of the latter she has always striven to be the greatest upholder.

THE PERIL OF THE BALKAN STATES.

The true interests of the Balkan States are well defined. The incongruous alliance of Germans, Hungarians, and Ottomans, while it lasts, aims at nothing less than the ex-

* October, 1913.

tion of what were once the Danubian Principalities, and which received the foundations of their liberties at the Congress of—Berlin, of all places. The Germans in their Eastern campaign are fighting, above all things, for domination in the Near East, and their aim is to establish that domination from the North Sea to the Persian Gulf. The Balkan States lie in their path. A triumph of the German arms would mean an end to their independence. Their future depends entirely on the success of the Allies. Our victory is their gain, our defeat is their ruin. The time has come for them to put aside their differences and take their part in the fray. Bulgaria especially would do well to bury the past and identify herself with the only ideal which is in keeping with her national ideals : the emancipation of Slavdom. Rumania now has the chance, which may never occur again, of freeing her two million fellow-countrymen who are now under the Hapsburg heel, and are eagerly waiting for the moment to gain their freedom. We hope that Greece will permanently occupy northern Epirus, from which she has so far been excluded by the machinations of the Austrians in Albania. Servia has seen clearly enough that Austria has thought her mere existence as an independent power a menace to the future of the Dual Monarchy, which has lately shown such signs of decay, and the desperate position of which, as much as any other cause, has been responsible for the present world-conflict. For the continuance of Austria as a great Power was only possible as long as the Balkan States quarrelled among themselves, and had a large portion of their rightful possessions under alien rule. The triumph of the Principle of Nationalities in the Balkan War reflected unfavourably on the suppression of nationalities in the Hapsburg dominions. A continuance of chaos in the Balkans was the only chance Austria had of retaining her dominions. Her Near Eastern policy has therefore always been a menace to the peace of Europe. We must see to it that the mischievous influence of Austria is now terminated for

good. This will give a new era of peace and development to the Balkan States.

INDIAN LOYALTY.

The news from the front shows that the Indian troops have more than held their own when faced with the Kaiser's conscripts. And even if all the Indian regulars had been already in the field, there is abundant evidence that the supply of Indian volunteers is practically inexhaustible ; or, to use the phraseology of the Czar in estimating his own forces, " so large that its numbers can scarcely be guessed."

Now that the *Emden* and *Konigsberg* have been accounted for, and Tsing-Tao has fallen, German power of mischief in the Indian Ocean and the Far East has ceased. Our merchantmen can sail the Indian seas once more without fear of molestation, and the Anglo-Japanese Alliance, which the Mikado has so faithfully kept, will insure the peaceful and legitimate trade expansion in Far Eastern waters, without the danger of German interference. The German flag has now been lowered on all the former Pacific possessions of the Kaiser, and every day brings us closer to our great goal, the extermination of German military and commercial methods, which have been, since their inception, the great and deliberate menace to the world's peace, and which have made all efforts for the friendly co-operation of nations of no avail.

INDIA AND THE WAR

I. INDIA'S ATTITUDE

BY A. YUSUF ALI, I.C.S. (RETIRED)

THE significance of India's splendid response to the call of the Empire has rightly impressed both the British public and British statesmen. The earnest words with which the Viceroy's message on the subject was read out to the House of Commons by the Under Secretary of State produced a thrill among the members for which it is difficult to find a parallel. A similar impression was produced in the House of Lords, when Lord Crewe, as Secretary of State for India, made his announcement of India's attitude on the outbreak of the war.

The Viceroy's message on the subject, briefly summing up the facts of the situation in India, conveys, behind its official phraseology, something of the enthusiasm and fervour which animate the mind of the people of India. The sentiment of solidarity and the desire to help are not confined to any particular class or section of the population. From the highest to the lowest there is a universal desire to rally round the flag, and to show to Britain in the hour of her need that the finest traditions of Indian chivalry and Indian loyalty are still alive.

Let us take a brief glance at the situation as it existed before the declaration of war.

Like every other country in the world, India has its

parties and its feuds. In politics there are many lines of cleavage—religious, racial, and those relating to questions of principles and policy. In social life there are many contending factions, and the clash of ideas is particularly strong at the present day, when older ideas and institutions are melting into the newer and more advanced ideas and institutions of the future. Plague and famine have been at work for many years, and there was a general feeling of pessimism in regard to the attitude of the people towards the Government. Although it is certain that the vast mass of the people were always loyal to the core, there was a strong, if silent, minority, amongst whom, unfortunately, anarchical doctrines obtained some currency. A prolonged State trial in Delhi, which has just ended, showed the many ramifications of the cult of anarchy and bomb-throwing. The numerous questions of political interest which became the bones of contending factions under the new Constitution which Lord Morley's scheme gave to India, were, before the war, being hotly debated in the Press and on the platform. The release of Mr. Tilak had revived speculation as to the attitude which this advanced democratic leader would take in current politics. The questions of Education and University Reform had ranged people of varying opinions in opposite camps. The second Triennial Council Elections last year revived the fury of certain religious antagonisms, and an unfortunate misunderstanding about a Cawnpore mosque even resulted in bloodshed. The best statesmanship of Lord Hardinge's Government had to be called into play to soothe Muhammadan feeling, which had become extremely sore on account of the dismemberment of European Turkey.

But the news of the declaration of War between England and Germany completely lulled all strife. Public opinion felt firmly convinced that England had been driven to war in defence of the very highest principles of international morality. It was felt that the championship by England of the cause of the smaller nationalities, and

especially of Belgium, which has within the last few years forged new bonds of commercial amity with India, was inevitable, having regard to the whole course of British history, in which the worship of liberty, the preservation of nationality, and respect for racial and religious diversities have always been predominant features of British policy. There could be no question that such danger as there was to Great Britain was a danger to the whole Empire, and, whatever jealousies and heart-burnings there might have been previously in regard to the relations of India to other parts of the Empire, these were completely forgotten in face of the common danger that threatened the Empire as a whole. The splendid example of Ireland, where the bitterest animosities were stilled as if by magic, was not without its influence. India felt that she could not be outmatched in questions of loyalty or of helpfulness in a time of common danger.

When the storm broke, there were not wanting some of the initial symptoms of alarm and financial stringency. It must be remembered that India's finance and trade are largely dependent upon the Money Market of London, and a disturbance of this gravity could not but extend to every branch of Indian trade, finance, and industry. But such disturbance as there was was purely momentary. In a few short weeks all signs of alarm or haste or panic had completely disappeared, and under the lead of public opinion the Indian people resolved to face the future with complete confidence in the ability of England to protect her own interests and those of her widely spread Dominions.

The most dramatic symptom of the stirring of public opinion was revealed in the offers of military assistance which poured in on the authorities. All the martial races of ancient renown, and some whose martial vigour has not been recognized, but which have aspirations towards martial fame, unreservedly threw their weight into the scale. The Feudatory States, in accordance with their traditional policy, came forward immediately with splendid offers of assistance

in men, equipments, and money. British India was swept by a wave of loyal patriotism. It was in accordance with Lord Hardinge's wonderful insight into the feelings and aspirations of India that he was able to take the tide at its flood. The enthusiasm to serve under the Union Jack and to co-operate in leading the cause of England and of right to victory, required an outlet which was not to be denied.

The Government of India decided to send an Expeditionary Force of two Divisions immediately to the theatre of war to co-operate with the British, French, and Belgian forces. Of all parts of the British Empire perhaps India is the readiest with her land forces. With a large frontier to defend and numerous tribes of war-like traditions all round her borders, she maintains her troops in the most efficient condition. Besides the well-equipped British troops of the garrison, there are over 160,000 Indian troops, which for discipline, valour, and staunchness in the field, will stand up to any troops in the world. There is besides a body of 22,000 Imperial Service troops maintained by the Feudatory States specifically for Imperial purposes. Britain has no direct control over the internal affairs of the States, but these Imperial Service troops are trained on the best British models, inspected by British officers, and are always at the disposal of the Government and the Empire in every crisis. Within a few weeks of the commencement of hostilities the Viceroy was able to announce that 70,000 men were ready for embarkation, completely found and equipped in all particulars.

No details of the composition of this Indian Expeditionary Force have been published. But the general character of the elements of which it is composed has repeatedly been described, and by none more fully than by the late Commander-in-Chief in India. Facts and legends about Gurkha kukris are now as well-known in France as those about Highland kilts and bagpipes. The well-kempt Sikh beard, and the symbolic Sikh quoit, have also impressed the imagination of those in search of the picturesque. The

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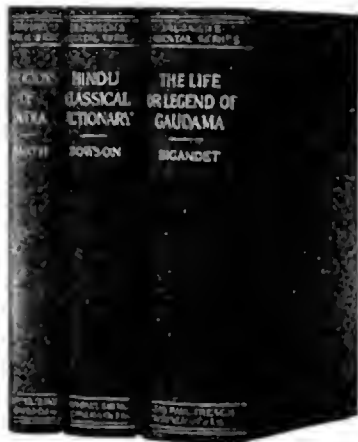
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Muhammadan troops, Punjabi and other, have no visible symbols of that character, but in dash, bravery, and firmness they will yield to none. The superb Lancers, with their steeds from Rajputana or the Punjab, and the magnificent camel corps of Bikanir, are not likely to be less effective in use than they are in pictorial effect.

This will be the first occasion on which Indian troops will have taken actual part in European warfare under the British flag. It is true that an expedition was brought over to Malta from India in 1878. But it was only 7,000 strong, and although it consisted of all arms—cavalry, infantry, Gurkha scouts, sappers and miners, and artillery, it was mainly utilized as a reserve in Malta for possible contingencies. It had no opportunity of taking part in actual warfare against Russia, as the war ended not long afterwards. But it showed the resources on which England could draw in time of need. It was then anticipated that, given time, there should be no difficulty in raising a million men from India. What was true in those early days of Imperialism is even more true after thirty-six years to-day, when India's population stands at over 315 millions. A *Standard* correspondent from Malta in 1878 was able from personal experience to write: "The Europeans and natives fraternize cordially, and the general behaviour of the troops is unexceptionable." How much truer will be the comradeship now, when Britain and India are so much closer to each other?

It has been stated in some quarters that the value of Indian troops as mercenaries can scarcely be measured in the same terms as that of national troops. This is a complete mistake. Everyone who is acquainted with the circumstances under which the Indian Army is recruited will at once recognize how much it partakes of the character of contingents going to fight in a great cause under leaders with whom the troops are completely and personally identified. The position is similar to that of the various contingents which poured forth in the Great War of the

Mahabahrat, signalized in the splendid epics of India. This war is already called, and really is, the Mahabahrat of this latter day (Kali Yug).

The backbone of the Indian Army is the peasant proprietary class. The men have small holdings of land on which they would be content to live, except for the love of glory and *izzat*, which draws them to enlist under the banner of their King-Emperor. The pay of the Sepoy or Sowar would not be sufficient to attract the men for its purely monetary value. It is accepted as a mere adjunct. The chief motive is the motive which operates in all professional armies—a sturdy love of serving and fighting in defence of their country and in the service of their King-Emperor. A citizen army may have its value, but at any rate our British organization has always aimed at a highly trained professional army, in which heredity, tradition, and instinct combine to give the soldiers a pride in their calling, and a sense of honour and proportion in warfare. Such an army would go anywhere and do anything—untouched by political considerations, and jealous of its honour in the sight of those who know the laws of war. At any rate, the Indian troops are actuated by motives wholly different from those which swayed the Hessians and other German mercenary contingents whom Britain trained for European warfare in the eighteenth century. They are fighting for an Empire of which they are an integral part—for a Padishah who has sat in person on the throne of Delhi, and whose appearance in the Jarukha of the Delhi Fort in the sight of millions of spectators on the banks of the Jamna was one of the most memorable episodes in the Imperial Coronation visit to India.

Nor will the sneer about the second-rate fighting qualities of Indian troops have any better answer than their own history in the past, and in the roll of fame that is opening for them in the immediate future. Lord Kitchener, who is responsible for the organization of our Expeditionary Forces, was himself Commander-in-Chief in India, and no

one will accuse him of being content with second-rate material when he has so much first-rate material at command. Field Marshal Count von Waldersee, who commanded the Allied Forces in China in 1900, knows these Indian troops well, and is now destined to verify, in warfare against his own nation, the fine soldier-like qualities which he praised in another field fourteen years ago. Indeed, in East Africa, the Indian troops have already shown their mettle in fighting against the Germans in the present war. And now come accounts of the dash with which Indian Sowars can ride down the foe and take his trenches; of the daring with which Indian scouts can overpower the enemy's sentries and locate his guns.

The Indian Army is recruited for service within India's borders, but whenever an opportunity occurs for serving the State in other parts of the world there is always the keenest competition to volunteer and to be chosen for service abroad. In China, in Burma (before it became a British province), in Mesopotamia, in Afghanistan, in Somaliland, in East Africa, in Egypt, and all over the world where British interests have to be protected, Indian troops have shown how they can bear their part in the fighting line.

Indeed, the eager desire of Indian troops to fight under the flag wherever that flag has been threatened, has not always been crowned with the opportunity. During the Boer War, the feeling in India for some participation in the war was very strong. Indian resources and Indian ambulance parties were employed, and it has often been said that "India saved Natal." But neither British Indian troops nor Indian Imperial Service troops were allowed to gratify their desire to pour forth their blood on the veldt as a symbol of the unshaken solidarity of the Empire. It may be that if their qualities in honourable warfare had become known to the Boers in South Africa as they were known to their officers in India, the subsequent years of bitter controversies between Indians and South Africans

might have been avoided. Lord Hardinge, with statesman-like delicacy, referred to these controversies in his Council when the finances of the present war were dealt with, and it will stand as an eternal monument to his insight that he has been able to understand and meet the desire of the Indian people to have their troops fighting side by side with their British and Colonial comrades, and to convince this country of the moral necessity of India sharing in the expenses and conduct of this war.

The enthusiasm of the people of India is not confined to the military castes. All the professional classes, even those who usually take up a critical attitude in regard to Government, have shown by their patriotic action in the present crisis, what an asset they are to the stability of the British Indian Empire. The resolution in the Viceroy's Imperial Council voting the expenses of the Indian Expeditionary Force was proposed by an elected Hindu representative of the people, and was carried unanimously amidst scenes of wild enthusiasm. Lawyers and professors in the Presidency towns have offered to be instructed in First Aid and drill in order that they might be useful in this time of war to their country and their Empire. The spirit of the student class both in India and in all centres abroad where there is any considerable body of Indian students, has been equally responsive. The Indians in England have already provided a unit of ambulance corps to be drilled and equipped to go out to the front under the St. John's Ambulance Society. A body of Indian doctors and nursing orderlies are at this moment looking after the first batch of Indian wounded received from the front. Well might Lord Curzon say, as he did at Glasgow: "There has never been anything in history to compare with this demonstration of Indian devotion."

What is the cause of this splendid outburst of feeling, when pessimists were, just before the war, complaining of the estrangement of India from England? Undoubtedly the most potent cause of the welding together of public opinion

has been the personality of the King-Emperor. King George was the first British sovereign to go out to India to announce his Coronation. He is personally known to all the Princes and the principal men of India. His courtesy and tact won him all hearts, and the splendid womanly qualities of the Queen-Empress, who accompanied him to India and joined in all the State functions, could not help driving home to the people the true secret of British strength and predominance, namely, the purity of the English Court and the splendid example of devotion and self-sacrifice within the sacred precincts of English homes.

The King-Emperor gave to India the royal motto of "Hope" and India has responded without reserve with her loyal motto of "Devotion."

II. INDIA AFTER THE WAR

BY E. AGNES R. HAIGH

The generosity of Indian Princes and peoples in offering their services on the European battlefields and contributing royally towards the prosecution of a European war came as somewhat of a surprise to the British nation. That India, throughout her whole extent, should show herself loyal was never doubted : that she would lend herself with a certain recklessness of enthusiasm and a total disregard of personal advantage to the furtherance of England's interests carried with it implications of a feeling which had not been recognized or even suspected. The results of the co-operation of Indian with British and Colonial troops in the field is bound to have its effect for good within the Empire : it is bound, also, to bring to the fore many grave issues, the settlement of which might otherwise have been retarded. But, before all, we count with confidence upon that closer fellowship, that franker understanding which comradeship in time of stress must bring about, more especially when that

comradeship is founded upon feelings so spontaneous and human as loyalty and gratitude. The occasion is unique, and, speaking for the moment exclusively from the English point of view, carries with it, like all the good gifts of Heaven, the responsibility of worthy acceptance. If India's "splendid response," and "wonderful wave of enthusiasm" have, to such an extent, astonished the country, does this not indicate the duty of discovering wherein the popular estimate was at fault? The trivial view is bound to find expression, even at times of the truest solemnity, so we must not be surprised if, now and again, we hear it said, "Here is a well-earned tribute to the justice of British rule in India": but the trivial view is not bound to find general acceptance. Fair-minded men will instinctively resent an explanation which does little credit to the quality of emotion aroused by the event. The plain fact is that India, by her action, has placed the Imperial Government under a heavy debt of obligation; not in any spirit of deep-seated calculation, but with a courtesy and chivalry which can only be recognized by a response in the like terms. In order to understand the situation and its needs we must ask ourselves two questions: "What are the motives, conscious or unconscious, which promoted India's outburst of generosity?" and "What is the debt of honour to which England is pledged by her acceptance of India's aid?"

The first question might, in its literal sense, be answered briefly; but its larger implications demand a much more detailed consideration. What, in truth, is India fighting for? Clearly not for any reasons connected with the rights or wrongs of the war, however her sympathies may be affected. European disagreements do not touch India, except indirectly, and the creed of militarism, to which the Allies are opposed, would not in itself so gravely scandalize the fighting races of India as to prompt them to take up arms in a Holy Crusade. Add to this that Indians have no grievance of their own against Germany, a country which,

like France and England, has treated them with kindness and regard, and whose scholars, moreover, have shown quite as much appreciation of ancient Indian culture as any others in Europe. Again, admitting that British rule in India aims at being just and equitable, and that British administrators succeed, in proportion to their ability and understanding, in discharging their duties fairly and conscientiously, there is still much in the relation between government and people that needs readjustment. "Unrest" is not the equivalent of disloyalty, and the wisest of British statesmen are not less concerned with the legitimate problems of nationalist claims than are the nationalist representatives themselves. Beyond this there has been, by custom, if not of necessity, so little social intercourse between the British official classes and the Indian people that the suggestion of a strong personal devotion inspiring India's proffer of help—rather, let us say, imperative demand to help—cannot be accepted by anyone who is acquainted with the conditions of life in India. What other motive remains? Policy? Yes—if one may use the word to describe that instinctive sense which governs a man's actions, even where no conscious thought is involved, in the most vital issues of life. Such a "policy" has inspired India at the present crisis, uniting in a common impulse communities and associations, religious, political, and social, of all classes and creeds, individuals of high standing, rulers of native states, extremist leaders, and even the handful of seditionists whose notoriety has usurped an amount of attention so much out of proportion to its importance. India has but one object—that is, to show her loyalty, and to prove what that loyalty is worth. The comment of the Secretary of State for India on Lord Kitchener's announcement gives the truth of the matter in a very few words: "It has been deeply impressed upon us that the wave of wonderful enthusiasm and loyalty which is passing over that country is, to a great extent, based upon the desire of the Indian people that Indian soldiers should

stand side by side with their comrades of the British Army. . . . A phrase used by Sir Gangadhar Chitnavis in the Viceroy's Legislative Council makes the exact meaning of that loyalty still more clear when he speaks of Indians' "joy at the opportunity which had been given to prove their claim to be regarded as worthy members of the noble fellowship of the Empire." Indian loyalty has indeed been vindicated beyond any manner of doubt. The tone of enthusiasm is not to be mistaken: the figures speak for themselves. Through the Indian Government England is receiving 70,000 men of all arms, fully equipped. Very numerous are the private offers, made by independent chiefs, of personal service, troops, and aid of every kind, and contributions of money by subscription or private donation have made a substantial difference to England's financial position in the war. Most significant of all is the insistent claim of India to bear the whole cost of her own expeditionary force—an offer happily accepted by the British Government, although its acceptance meant the setting aside of a provision of the India Act of 1858. The numbers of the Indian expeditionary force are far in excess of those supplied by any of the Colonies (*relatively* less than those of Australia, only because Government has purposely restricted the size of the Indian Army), and India is the only one of the Overseas Possessions which is making any direct contribution of money. India has, in fact, taxed her utmost resources with a zeal which shows how vital to her is the issue at stake, in the effort to prove her point to demonstration.

Now, why did Indians feel the need of proclaiming their loyalty, of vindicating their status, by arguments so conclusive—the most lavish of material contributions and the voluntary hazarding of life upon a distant battlefield? Because they felt that either loyalty or status was called into question? Let us examine the facts. Queen Victoria, in the Royal Proclamation made after the Mutiny, expressly stated that her Indian subjects were to be held in equal regard with

all other of her subjects throughout the Empire. The same proclamation was repeated by King Edward on his accession, and again, only recently, by King George. Has this principle been literally upheld in practice? Without the slightest wish to disparage existing institutions, or to question the integrity of motive of responsible statesmen, one is compelled to admit that it has not. To take an example. The Government of India, for reasons which it considered no doubt adequate, has chosen to disarm the people. India is the only part of the Overseas Empire in which citizens are not allowed to have any military training or to take measures for their own protection. In Australia, Canada, New Zealand, South Africa, the people may practise rifle-shooting, form defence corps, and so on, but in India even the most scrupulously law-abiding citizen comes under the provisions of a stringent Arms Act, unless he is exempted as a European, a title-holder, an official, or by name as an individual exception. The scope of the Indian Arms Act is so wide that it embraces every sort of weapon, including rusty old swords of no more than sentimental or ceremonial value. Indians realize that they may be attacked; the *Emden*, for example, if she had had sufficient support, might have landed marines at some point and effected a raid. But for protection the Indian people is dependent, not on its own efforts, but exclusively on the Government. The reason is given that there has been agitation for reform in India, that seditionists incite to extreme and unlawful measures. But Indians can object that there is agitation for reform in every progressive country. They may retort by asking if there has been no "unrest" in England of late years, if extremists have not used the most lawless and violent of arguments without their fundamental loyalty being thereby called into question. Or, again, when Imperial Conferences take place, as they customarily do every four years in London, India alone is not represented. Vital measures concerning the welfare of the Empire and its defences, questions of

tariffs, naturalization, etc., are discussed, but India has no voice even on matters relating to her own internal affairs. The Press Act, the Cotton Excise, Deportation without Trial—whatever view individuals may take of their wisdom or expediency—are all so many instances of political disability which place India in a position of unquestionable inferiority when compared with other units of the British Empire.

Furthermore, what is the relation existing between India and the sister-dependencies of the British Crown? In Natal, which owes its prosperity mainly to Indian labour, life has been made more and more difficult for all classes of Indian settlers. Australia, New Zealand, Canada, have all placed a definite ban upon Indian immigration. The case of Gurdit Singh and his effort to test the law on this point is of recent memory. He chartered a vessel—the *Komagata Maru*—and set sail for a port in British Columbia: permission to land was refused, and he and his companions, two or three hundred of them, had to return without satisfaction to India. Such are instances of the disabilities under which Indians suffer in point of status. They have no remedy and no redress: there is no Imperial Court to which they can appeal, and the Indian Government, as already mentioned, has no standing at Imperial Conferences. Looking to the autonomy of the various Colonies of the Empire,* can we be altogether surprised if India feels that her powers are restricted in a manner scarcely in keeping with the intention of the Royal Proclamation?

Such facts as these must be frankly faced if we are to arrive at an understanding of the temper and feelings of the Indian people at the present crisis; and this brings us to the second consideration. What is the moral obligation

* It is just the autonomy of the self-governing colonies which gives them the control of their own internal affairs. We may cite as an *extreme* instance of this that the question of immigration of alien enemies to Canada and Australia at the present juncture, as Mr. Harcourt pointed out in the House of Commons last session, was even now a matter to be settled by Canada and Australia, and not at Westminster.—ED.

which the British Government has incurred by its acceptance of India's aid? That England owes a debt of gratitude to her Indian subjects is clear, and that this debt must be acknowledged with a like spontaneity of sentiment belongs to the nature of the debt. In other words, this is not a question of bargain or contract, since India's demonstration of loyalty was, neither in manner nor intention, a bid for material gain. Her contribution was a free gift, with no conditions attached, —only the unspoken claim of being permitted to show herself worthy of trust. The true courtesy which prompted England's acceptance of the gift upon India's own generous terms cannot fail to respond to this implied appeal by an admission of its truth. If confidence has not always been felt or shown, it must now proclaim itself; if opportunity has been withheld, from motives however sincere and well-intentioned, it can be withheld no longer. True as it is that neither official England nor Nationalist India wishes to rush upon reform or precipitate inevitable changes, it is also true that the path to progress and development may not be blocked indefinitely. Delays, which an excessive caution might seem to suggest, can scarcely now be urged from the one side without the consent and co-operation of responsible members of the other. It may or may not be that India will soon show herself ready for political self-dominion. Problems must arise in her evolution which forethought and prudence can no more forestall than they can avert. There are many who hold that the ordeal of industrialism must be met and faced before India can become adult; that economic and political measures applicable to England are in advance of India's needs. This may be so, but we cannot assume it. No necessity has forced such an experience upon Canada, for example—to this day a land of crops, or Australia, a land of mines and pastures—both self-governing dominions with full legal powers to manage their own affairs. No individual or community is exempt from the human frailty of making mistakes, and the freedom to do so is a right which, the

responsible human being is justified in claiming as a condition of his growth. The best of human institutions have still their full measure of anomalies, all pointing back to some unnoticed blunder in conception, and the British Empire itself is rich in such instructive examples. The instinct of a competent administration to show a certain grandmotherly solicitude, lest its protégés should fall and hurt themselves, may be protective in intention, but is, none the less, cramping in effect. In any case the ideals of India can be worked out in her own experience alone, and none can deny her the right to that experience, or achieve its results vicariously. Certain it is that many problems in India's government and status will present themselves for solution so soon as the present crisis has ceased to occupy our energies and tax our strength; and it cannot be doubted that these problems will find their proper solution when all parties meet on a common ground of goodwill and respect. If India has shown that she can give with devotion and generosity, England has also shown that she can accept with a becoming grace; and no one will forget that in the giving and the accepting a relation has been established which can only be incurred with honour between friends and equals.

TURKEY AND THE MOSLEMS

HIS HIGHNESS THE AGHA KHAN, G.C.S.I., has sent the following message to Moslems in India and His Majesty's other Dominions :

" With deep sorrow I find that the Turkish Government has joined hands with Germany, and, acting under German orders, is madly attempting to wage a most unprovoked war against such mighty Sovereigns as the King-Emperor and the Tsar of Russia. This is not the true and free will of the Sultan, but of German officers and other non-Moslems who have forced him to do their bidding.

" Germany and Austria have been no disinterested friends of Islam, and while one took Bosnia the other has long been plotting to become the Suzerain of Asia Minor and Mesopotamia, including Kerbela Nejef and Bagdad. If Germany succeeds—which Heaven forbid!—Turkey will become only a vassal of Germany, and the Kaiser's Resident will be the real ruler of Turkey, and will control the Holy Cities.

" No Islamic interest was threatened in this war, and our religion was not in peril. Nor was Turkey in peril, for the British and Russian Empires and the French Republic had offered to solemnly guarantee Turkey all her territories in complete independence if she remained at peace. Turkey was the trustee of Islam, and the whole world was content to let her hold our Holy Cities in her keeping. Now that Turkey has so disastrously shown herself a tool in German hands, she has not only ruined

herself, but has lost her position of trustee of Islam, and evil will overtake her.

"Turkey has been persuaded to draw the sword in an unholy cause, from which she could be but ruined, whatever else happened, and she will lose her position as a great nation, for such mighty Sovereigns as the King-Emperor and the Tsar can never be defeated. Thousands of Moslems are fighting for their Sovereigns already, and all men must see that Turkey has not gone to war for the cause of Islam or for defence of her independence. Thus our only duty as Moslems now is to remain loyal, faithful, and obedient to our temporal and secular allegiance."

His Highness the Nizam of Hyderabad has issued the following manifesto :

"In view of the present aspect of the war in Europe, let it be generally known that at this critical juncture it is the bounden duty of the Mohammedans of India to adhere firmly to their old and tried loyalty to the British Government, especially when there is no Moslem or non-Moslem Power in the world under which they enjoy such personal and religious liberty as they do in India, and when, moreover, they are assured by the British Government that, as it has in the past always stood the best friend of Islam, so will it continue to be Islam's best friend, and will always protect and cherish its Moslem subjects.

"And reiterate that in the crisis before us the Mohammedan inhabitants of India, especially the subjects of this State, should, if they care for their own welfare and prosperity, remain firm and wholehearted in their loyalty and obedience; swerve not a hair's-breadth from their devotion to the British Government, whose cause I am convinced is just and right; keep sacred the tie which binds the subject people to their rulers; and, lastly, that they should in no case allow themselves to be beguiled by the wiles of anyone into a course of open or secret sedition against the British Government.

"Finally, I give expression to the hope that, as I, follow-

ing the tradition of my ancestors, hold myself ever ready to devote my own person and all the resources of my State and all that I possess to the service of Great Britain ; so will all the Mohammedans of India, especially my own beloved subjects, hold themselves wholeheartedly ready in the same way."

The Begum of Bhopal, one of the few Moslem ladies who has made the Haj, or pilgrimage, to the holy cities of Arabia, addressed a large gathering of her Sirdars, officers, and people, on the subject of the present crisis in the Mohammedan world. Her Highness attributed Turkey's action to the fact that Germany has by stratagem lured Ottoman statesmen from the straight path.

The Prince of Arcot, presiding over the Madras Presidency Moslem League, said that their loyalty was too deep-rooted even to be shaken by political tornadoes. The Prince appealed to all leading Mussulmans in the various districts so to educate the masses as to prove that their loyalty stands above all suspicion.

His Highness the Khan of Kalat has intimated to the Viceroy that he has heard with utter disapproval of Turkey's action, and has telegraphed renewed assurances of loyalty and offer of services.

KIAO-CHOU

BY C. M. SALWEY

IT must have been a foregone conclusion that when the long-expected disruption of the peace of Europe culminated in the call to arms of many nations, the Japanese would consider the crisis a favourable opportunity to dislodge the Teutonic power from the Eastern Sea.

The presence of a German colony in the Far East, though tolerated with tact and delicacy at the time, has always been a secret source of anxiety, since it was bound to prove a menace to the tranquillity which had been striven and fought for by some of Japan's bravest armies.

The occupation of Kiao-chou by a Power whose aggressive intentions were of colossal magnitude had become a matter of serious concern to our allies.

The story of the "leasing" of this peninsula for the term of ninety-nine years has been fully discussed of late. It culminated in November, 1897, after the murder of two German missionaries, Nies and Henle, who suffered martyrdom at the hands of the Chinese in some obscure district of Shantung. This event was the excuse given, although the offence could have been otherwise dealt with in a less arbitrary manner, equally effective in securing immunity against further attack. Prompt action was, however, undertaken by the German Government, who had long desired the possession of a colony in the centre of Eastern activity.

The German Pacific squadron anchored in the bay; the Chinese General was given orders to vacate his position within a few hours; and the whole matter was speedily settled. In the following March the German flag was hoisted and the work of colonization began.

The bay of Kiao-chou is admirably suited for strategic purposes and a naval base. Its waters are protected and deep; for this reason it can accommodate ships of almost any size. It is in itself a natural harbour, the entrance to which is approached from Whang-hai, on the Yellow Sea, by an opening about two miles wide. The bay faces the lower, or southern, portion of Korea, from which it is distant several hundred miles. It is also on a direct line south-east with Peking. The waters of the bay cover about one hundred and fifty square miles. The boundary of this colony extends from the furthestmost point of the peninsula (taking in the shores) right up north as far as the Paishaho River; to the east it extends to the summit of the Lanshan Mountains. Within this area, scattered here and there, some close together, some far apart, are nearly three hundred villages, the homes of the industrial natives, who make their living chiefly by farming, raising scanty crops of vegetables and cereals, or by pursuing useful trades of a light nature—water-carriers, and porters, and so forth. This peninsula is very mountainous. Three distinct lines of elevation add their beauty of outline as well as their protective presence to the province of Shantung, which lies at the back and in the north of this important stronghold, whose rightful occupation is now under dispute. Years ago these last range of mountains received German names, and are respectively known as "The Bismarck," "The Moltke," and "The Prince Henry," the most formidable of all being the Lanshan range, which creates an impregnable barrier between the "leased" land and China.

When Kiao-chou fell into the hands of the Germans it appeared a barren, unprofitable spot that had received but scanty attention from its natural owners, who themselves

hardly realized the wealth that lay beneath the soil, or the possibility of useful food supplies that could be gained by cultivation. Besides its minerals there exists a fine supply of coal, which at this present stage of naval requirements is indispensable.

Since 1898 great improvements have been undertaken ; Kiao-chou has literally been transformed. A railway extends over two hundred and seventy miles, running from Tsing-Tao to Poshan. This railway has facilitated trade with Northern China, and proved of the greatest service to the authorities. Around the bay, hills to the height of between four hundred to six hundred feet afford a splendid natural rampart, and provide the essentials and facilities for fortifications. These have not been neglected, as recent events have only too thoroughly proved. The forts are garrisoned with 5,000 German and Chinese marines, and offer grim resistance and constant menace to the allied forces, eager to win back for China what was insidiously wrested from her without sufficient ground. The hills that encircle the bay were devoid of forestry, and the region presented an aspect of barrenness. Young trees of many kinds have been imported from Japan, and are slowly becoming acclimatized, which will add considerably to the charm of the general contour of the land. The work of planting and digging out the stony soil was assigned to the Chinese coolies, who were soon made to understand that the new-comers required this laborious task to be carried out conscientiously. Their hardships were great, and the knowledge that the task was not for their own benefit did not serve to increase their eagerness.

Kiao-chou and the appropriated environs have greatly risen in importance and in value. The small fishing-village of Tsing-Tao soon grew in magnitude. It possessed all the natural advantages necessary to becoming a town, and eventually a city. Fine buildings have been erected everywhere. The Imperial Post Office, the Deutsch-Asiatische Bank, Prinz Heinrich Hotel, the Government Chapel, the

Imperial Maritime Custom House, have been already erected, and contribute their share to the general adornment, as well as proclaiming this German colony to be in a prosperous condition.

We need not carry our minds back many years to remember how those who passed their lives on this disputed parcel of land were more than content to pick their way along stony tracts and unfashioned paths, and wander from village to village, hawking their goods and exchanging their wares with each other, little dreaming of all that was about to happen. The Chinaman, from the highest to the lowliest born, was faithful to old customs, manners, and methods of living, and desired little else than to be left alone, convinced that all that went on in the Celestial Empire was the only and right way, and was sanctioned and established by a Higher Power. The fishermen pursued their trade unmolested in frail boats, gathering in the harvest of the sea from day to day, in utter ignorance of the huge vessels that would some day plough their waters and send forth their deafening thunder, culminating in deadly destruction.

The unique style of architecture, noticeable everywhere, is of a decidedly Oriental type. Some of the new buildings are three and four stories high. They are of considerable size, and present an imposing appearance. The windows are protected by being set well back, with deep verandas finely arched to admit light, and at the same time forming a façade in front of both upper and lower story. Despite the amount of money and care that has been expended, there is an air of rigour and restraint apparent everywhere. The lack of forestry and herbage may in some way account for the stiffness, which is very marked.

Schools have been organized for the Chinese as well as Europeans. Drainage has received attention, and a good water-supply has been procured, which was greatly needed. Electric lighting has added to the comforts of all, and illuminates the main thoroughfares of this newly organized town.

Trade has increased at a rapid rate, and owing to the enterprise of the Shantung Railway Company, the length of railway has reached 300 miles. The fine station at Tsing-Tao is a handsome addition to the many other buildings. The impetus given to trade is largely due to the system of land taxation, which brings in a considerable revenue to the Government. It hinders all speculation in land, as well as preventing the profitable tenure of land when left uncultivated.

It was on Monday, August 24, 1914, that it became known that Japan declared war on Germany, on account of her occupation of this Far Eastern colony. The stern ultimatum of seven days' limit had expired on the previous day. On November 7 the German flag was lowered at Tsing-Tao. The expulsion of the Germans, and the elimination of their trading methods, will bring peace and prosperity once more to Far Eastern waters.

TURKEY AT THE PARTING OF THE WAYS*

BY F. R. SCATCHERD

I

Now that most of the European States are at war with each other, Turkey's attitude is of the greatest interest, and the question is continually asked: What position will Turkey take up in the present crisis?

As far as one can judge, the Turkish people are in favour of strict neutrality. This, however, does not coincide with the views of their German inspirers and instructors, who are, naturally, of an opposite opinion. In the Cabinet only the War Minister, Enver Pasha, desires war, and that in order to avenge the loss of Rumelia and Salonika, and to reacquire the ill-fated islands. The Grand Vizier, the Minister of the Interior (Talaat Bey), and the Minister of Finance (Djavid Bey), must surely be advocates of peace and neutrality. And should Turkey be dragged into the war, it would be mainly due to infection with the Prussian virus, which the whole world is engaged in stamping out.

There is little doubt that German influence is paramount in Constantinople, and that the Turks are more friendly with the Germans than with any other Europeans. But this friendship is not without an *arrière-pensée*.

* Owing to pressure on our space, this article, written in September, was held over from the October number. It is now inserted in its original form, though events have considerably developed since the time of writing.—Ed.

Turkey knows that Germany is the only Power professing friendship with her. That fact is sufficient to inspire suspicions of German sincerity, and the conclusion arrived at is that this friendship is due to selfish motives. Turkey has not forgotten that when Austria annexed Bosnia and Herzegovina, Germany did not lift a finger on her behalf. Neither did she protest against Italy when that Power sent an expedition to Tripoli.

Turkey perceives that German activity has been mainly directed towards securing great concessions on profitable terms, without as yet much benefit to herself. Therefore, if Turkey is infected by the war fever, it will be with a heavy heart that she will find herself following her German leaders.

England has, even now, hosts of true friends among enlightened Turks, who still remember the Crimean War; but if Turkey be forced to side with the enemies of England, it will be due to the improved relations between England and Russia. The Porte regards Russia as her inveterate enemy, and cannot side with a friend of Russia, whoever it may be. Djavid Bey, in particular, should be dead against a war that would result in strained relations with France. I was in Paris last autumn when Turkey was trying to raise a loan, and I know something of the obstacles that had to be encountered. Djavid Bey alone can gauge the difficulty with which he procured from the French bankers a little money wherewith to carry on the administrative machinery of his country. Were Turkey to join the Triple Alliance, she would forfeit the promise of France for the second half of the loan which Djavid Bey then secured, and which, in the highest interests of Turkey, ought never to have been granted without full guarantees for the carrying out of the long promised reforms.

The rank and file of those in the pay of the Government would side with Djavid Bey against such a war, since it was only through the loan that they began to receive the

arrears of their past salaries. And they realize full well that were Turkey plunged into a fresh war, there would be no more payment forthcoming. Here, it must be added, in justice to the Turkish soldier, that he is not a mercenary. For years he has received but a portion of his due, yet for Allah and his country he would sacrifice with joy even the pittance he now receives.

II

With regard to the present crisis, it would appear that Turkey's wisest course, nationally and economically, lies in the preservation of strict neutrality. But should she find herself forced to participate in the conflict now raging, despite all leanings towards Germany, her real interests would range her on the side of the Triple Entente.

England is, after all, her truest and best friend, because she is the only disinterested one among the Powers. England is the only country whose interest it is to keep the *status quo* as to the distribution of territory. No wise English statesman would wish to add an inch to British territory. England has already so great a burden of administration, that all her care and attention are necessary to discharge her heavy responsibilities. Turkey can therefore rest assured that England is not coveting a foot of Turkish possessions. Her sole anxiety is to prevent others acquiring any portion of the Ottoman Empire, as, in that case, she might be forced to take her share in order to maintain her own position in the East. England really needs a reformed, prosperous and strong Turkey—a Turkey with true national and Islamic aspirations, a unified country, not a purely self-seeking, irreligious, self-glorified cabal.

With Germany the case is different. Her anxiety to acquire colonies (in the Prussian conception of the word) is well-known. This should put Turkey on her guard, to prevent the entry of Germans into her dominions.

That Germany already regards Asia Minor as her colony is an open secret in Europe. The Bagdad Railway puts the country at the disposal of Germany, and in a few years the German colonists settling along the line will thrive to the exclusion of all others.

War fever ever ebbs and flows at Constantinople. Should Turkey enter the lists, it will mean a renewal of the Balkan Alliance and the Balkan War. Past experience should teach Turkey that after every Eastern war the account is always settled at her own expense. Surely the results will not be less disastrous, should Turkey again open up the Eastern Question, despite the repeated warnings of Russia, France, and England. It would be, indeed, a policy of sheer suicide for Turkey to break her neutrality and take part in the present contest.

III

The friends of Turkey cannot, therefore, do better service at this juncture than to impress upon the minds of those in power at Constantinople the necessity of preserving that neutrality.

And Indian Moslems, instead of petitioning the British Government, as the greatest Moslem Power, to protect Turkey, ought, above all, to urge upon the Turkish Government that the best and surest line of policy is the preservation of neutrality, and if that prove impossible, to lean towards friendship with the Triple Entente rather than with the Triple Alliance. While thus backing up the British Government, the India Moslems should counsel Turkey—

To consecrate her time, energy, and resources to internal prosperity and economic development.

To strengthen *true** Moslem religious sentiment, which

* *The Family of Imran* :—

78. *Say*: We believe in God, and in what hath been sent down to us, and what hath been sent down to Abraham and Ismael and Isaac and Jacob and the tribes, and in what was given to Moses and Jesus and the

is not against progress and enlightenment, as so many imagine, nor does it regard non-Moslems as, of necessity, infidels, and justify their treatment as such. Indeed, it expressly enjoins the opposite.

To extend absolute liberty and equality to the non-Moslem sections of the Empire, and so render them true co-partners in working out national salvation.

How nobly and efficiently the non-Moslems would respond to such action on the part of Turkey is proved by the success of the Christian deputies in the present Parliament.

Take, for example, *Haladjian Effendi*, who is working heart and soul for the benefit of the Ottoman Empire, with such impartiality that the Armenians are more than inclined to regard him with suspicion, especially as he is one of the few active and enlightened leaders of the *Committee of Union and Progress*. I have heard how this man has worked night and day, three months on end, going through the big volume of the Turkish Budget, and the papers, plans, and projects of administration, so as to facilitate the work of presenting them to Parliament; and Moslems and Christians alike admit that he is a tower of strength in the Chamber.

prophets from their Lord. We make no difference between them. And to Him are we resigned.

2. In truth hath He sent down to thee "the Book" which confirmeth those which precede it. For He had sent down the Law, and the Evangel aforetime, as man's Guidance; and now hath He sent down the "Illumination" (*i.e.*, the Koran).

Women. 161. Verily we have revealed to thee as we revealed to Noah and the prophets after him, and as we revealed to Abraham and Ismael and Isaac and Jacob, and the tribes and Jesus and Job and Jonah, and Aaron and Solomon, and to David gave We Psalms.

Thunder (xiii. 8): Thou art a warner only, and every people has its prophet.

Cow. 285. The apostle believeth in that which has been sent down from his Lord, as do the faithful also, each one believeth in God and His angels and His books and His Apostles. [*We make no distinction between any of His Apostles.* And they say, "We have heard and we obey. Thy mercy, Lord! for unto Thee must we return."]

Zohrab Effendi is another Armenian deputy, even more influential. An able lawyer, he possesses remarkable faculty for grasping vital issues, and his knowledge and experience of European and Turkish affairs are of the utmost service when difficult questions arise. After one of his great speeches little remains to be said, so thorough and exhaustive has been his treatment.

Then there is one of the most recently elected deputies of the Ottoman Chamber, Professor G. Thoumaïan, member for Cæsarea, "London's Turkish M.P." During the few months spent in Constantinople he has endeared himself to the Turks, and is doing a work of the utmost value by his advocacy of improved educational facilities.

When the vote of the Ministry of Public Education was being discussed last July—

"Turks and Arabs pointed out the unfortunate fact that while millions were being expended on unproductive services, a beggarly sum of half a million was allotted to the educational department of a large Empire with twenty-five million inhabitants."

The reply of Shukri Bey, the Minister of Education, was to the effect that it could not be helped, since there was no more money at their disposal.

"A striking effect was produced by the speech of Professor Thoumaïan in the debate. He spoke straight to the Moslem population to follow the example set by their Christian compatriots in matters of educational and cultural initiative. Under the old régime, he said, while Abdul Hamid was persecuting the Armenians and their homes were being wrecked, the Christians did not wait to ponder over the consequences, they gathered up their energies and started fresh schools and fresh colleges. He urged, therefore, his Turkish colleagues not to rely solely on the Government . . . they should take the initiative themselves in the educational work of their country."

To its credit, be it said, the Constantinople press, notably the *Tanin* and *Taspiri Efkan*, drew the attention of its

readers to Professor Thoumaïan's speech, and urged them to follow the example set by the Christians. A fuller account of this and other matters of interest to students of the Eastern Question will be found in the admirable little periodical *Ararat*, from the pages of which the above quotations are taken.

The ability of the Greek Ottoman deputies is too fully recognized to need mention; but, owing to the strained relations between Greece and Turkey, they have kept themselves more or less in the background. But the assistance of such men as Kharalambides and Ourfanides of Constantinople, and Emmanelides of Aidin, will prove of immense value in helping the various races of Turkey to work together for the common good.

Now one word as to the abrogation of the capitulations.

It is known, but not realized, that ever since the declaration of the constitution, Turkey has been governed by military, not civil law. The most innocent criticism of the established order, even by Turkish subjects, is treated as a serious offence, and may even be visited with the extreme penalty.*

It must be recognized that the Eastern Question is neither Turkish, nor Greek, nor Armenian—it is essentially a European question, in which all the European States

* "The assassination of Mahmoud Shefket Pasha by a few persons, blinded through hatred and ambition, has furnished the Committee of Union and Progress with a pretext for sweeping away all its opponents. And to-day I am informed 5,000 persons find themselves buried alive in the fortress of Sinope without previous judgment or inquiry. These 5,000 exiles, if we reckon that each has a family of five to support, will represent a total of 25,000 women, children, and aged persons left behind destitute and starving in a country in which organized charity is unknown." —F. R., in a letter to the *Daily Chronicle*, November 21, 1913.

Shortly after the appearance of this letter it was stated that the Turkish authorities had liberated the men unjustly banished to Sinope. I made inquiries in Paris and elsewhere, and was informed that this was not true. The few persons set at liberty were men of little or no political importance. —F. R. SCATCHERD.

are concerned, in which they all have immense interests, and which ought never to have been neglected—that the prolongation of the present conditions is as a gangrene in the body of Europe which, sooner or later, must culminate in disaster. In the interests of the inhabitants of the Ottoman Empire and of all Europe, once for all, a solution must be found which will prove satisfactory all round.

But as long as the "Black Hand" of Turkey (represented by a section only of the Committee of Union and Progress) is at the helm of State, it would be a crime to permit the abrogation of the capitulations, which are at present the sole guarantees for the lives and liberties of the European residents in Turkey.

It would be equally a crime against the honour and dignity of Turkey, as a civilized Power, to insist upon the continuation of the capitulations, once this misguided minority has seen the error of its ways, or been thrown overboard.

Mr. Asquith, speaking at the Guildhall on November 9 on the position of Turkey, said :

"It is not the Turkish people, it is the Ottoman Government which has drawn the sword, and which I do not hesitate to predict will perish by the sword. It is they, and not we, who have rung the death-knell of the Ottoman Dominion not only in Europe but in Asia. . . . The Turkish Empire has committed suicide, and has dug with its own hand its grave."

RUSSIA'S MISSION

BY H. M. HOWSIN

RUSSIA, more than the other European nations, still bears the marks of her origin. The transforming hand of Time and Circumstance has not yet availed to shroud her identity. We can trace clearly the parent streams mingling their characteristics and shaping the great nation which has not yet emerged from its precocious childhood. Slavonic tribes wandering over plain and forest, pastoral rather than nomadic, settled wherever the grass was good and the water-supply sufficient, and formed their families into well-defined village units with common laws and customs. The groups inhabiting the western regions separated themselves from those of Central Russia, laying the foundation for Poles, Lithuanians, and other groups within the great Slavonic whole. The Tartars, restless, nomadic, independent warriors; raiding, conquering, ever moving onwards, picking up the customs and manners from the people they harried, brought to the Slavonic stock, amongst other traits, that great facility for the acquirement of foreign languages, and that adaptability to circumstances which is the heritage of Russians to-day. Perhaps, too, their love of wild nature, their impatience of restraint and social obligations, their longing for wide spaces and unbounded horizons, had some influence in developing the separate village as the unit of communal life, in contradistinction to the Teutonic

and Norman genius, which gathered itself together within walled towns and cities. Southwards, the Cossacks—half Slav, half Turk—fled into the wilderness of the Steppes, freed alike from Tartar raiding, and from the centralizing authority of a growing civilization in Lithuania and Moscow. Clinging to the Christian faith, rejecting Christian authority, breeding small, wiry horses as fiery, as hardy as themselves, they established themselves a tribe of warrior-huntsmen—the Arabs of the Steppes.

The southern region of the Caucasus, between the Black and Caspian Seas, was already inhabited by another race of Circassian descent, with strong Persian influence—the Georgians; already highly civilized while the rest of Russia was deep in barbarism.

To the extreme north-west were the Finns, having no kinship with the Russians, but coming as they did from the East by way of Persia. They were, therefore, nearer to the Letts, who had Indo-European blood, and to the far-off Georgian nation.

The Russians derive their name, not from their Slav or Tartar ancestors, but from a tribe of Norse invaders, whom the rival Slav communities of Novgorod called in to restore order when they found it impossible, with their lack of cohesion, to live amicably side by side. These Russ Varavigians quelled the disturbances, but without undue aggression, and under their authority the Slavs grew and prospered.

In 988 the Emperor Vladimir, who hitherto had been zealous in the worship of the old Slav deity Peroun—God of the Lightning—set himself to seek out a new national religion which would be more advantageous to the State. He seems to have been actuated by purely disinterested and open-minded motives. He sent out a "Royal Commission" to Rome, to Constantinople, to the Moslem Volga Bulgarians, and to the Jews, to inquire into the tenets of these several religions, and make a full report to him. On their return they laid the results of their

labours before him, and Vladimir compared the qualifications of the contesting creeds. The rite of circumcision and abstinence from wine penalized Judaism and Islam: the growing autocracy of the Papal claim placed the Roman Church at a disadvantage; but the gorgeous ceremonial of the Eastern branch made a special appeal to the Russian temperament: his grandmother had been a Greek convert, and Vladimir finally decided on the Greek Catholic as the most suitable for the new National Church of Russia. He married a Greek Royal Princess, and was himself received into the Church by the Archbishop of Kherson. Christianity was proclaimed the State religion, and the sacred statue of Peroun was unceremoniously pitched into the Dnieper. This choice of the Greek rather than the Roman Church has had far-reaching results in further preserving the natural temperamental isolation of the Russian nation from the Roman politico-social development of Latin and Teutonic Europe—an isolation which even to-day marks Russia with the stamp of mystery, and makes for so many “the undiscovered country.”

To this period, when the old Pagan still mingled with the new Christian faith, belongs the Song of Igor, which merits special attention as one of the most beautiful and characteristic of the old Slav folk songs. The extracts given below are taken from the translation in “The Rise of the Russian Empire,” by Victor Munro. The subject is a campaign of Igor and his brother Svaioslavitch against the Polovtzi.

THE SONG OF IGOR, PRINCE OF SIEVERSKI

Then spoke Igor to his Army:

“Brothers and soldiers, it is better to fall in battle than to yield one's life; so we will mount our mettlesome horses and gain the Blue Don by daylight.” Yearning filled the soul of the Prince, and the wish to see the noble Don led him to forget many evil tokens. . . . O Boyan, thou nightingale of the olden days, if thou hadst inspired these

warrior bands, alighting on the Tree of Thought and hovering in the spirit of the clouds, thou hadst, O nightingale, united this severed time (that which is past with that which is) Not a storm-wind drove the falcons over the wide plain, nor hurried the flocks of daws to the glorious Don. Or thou mightest, sage Boyan, thus have sung : The steeds are neighing this side of the Sula, the war-song resounds in Kiev, the trumpets are crashing in Novgorod. The standards wave in Poutil, where awaits Igor his loved brother Vsevolod, and to him saith the bold, war-lusting Vsevolod :

O Igor, my only brother, my bright sun, truly we twain are the seed of Sviatoslav. Brother, let thy spirited war-horses be saddled ; already are mine saddled and waiting at Kursk, and my Kurskies are warriors, born midst the blare of the trumpets and nurtured at the point of the lance. The roads are familiar to them ; they know the passes, their bows are strong, the quiver is open, the sabres are burnished, and they themselves press forward, like grey wolves on the bleak wold, in pursuit of honour and princely renown.

Then set Prince Igor his foot in the golden stirrup, and rode forth into the wide plain. . . .

O Russian band, already art thou this side the hill.

Long lasts the night, the twilight dawn not yet foretells the coming of the Sun, darkness clothes the fields, the flute of the nightingale is hushed, while the croaking of the daws resounds ; but the Russians have bedecked the stretching plain with their purple shields, and strive after honour and the glory of princes.

Early have our warriors defeated the war-horses of Polovtsi, as they thenafter scattered with arrow swiftmess in the plain, bearing away the lovely Polovtsi maidens, and with them also gold and precious silken stuffs ; with costly rings, with cloaks and vestments the Polovtsi strewed the streams, marshes, and swamps.

O Russian band, still art thou this side the hill.

There flew the wind (Stribog's grandchild), bolts from the sea against Igor's brave fighters; the earth shuddered, mournfully flowed the rivers, dew-drops spangled the fields, the banners rustled.

(The Polovtsi return, and surround the Russians, defeating them.)

So for a day they fought, and for two days, but on the third, towards midday, sank the banner of Igor.

There on the banks of the rapid Kayala the brothers were sundered. . . .

But Igor's brave war-men shall never wake again. . . .

Loudly weep the Russian women. Alas! that never more can our thoughts to our dear husbands be wafted, that our eyes shall never, never again behold them, and gold and silver never more be stored. And therefore, brothers, Kiev groaneth aloud in sorrow and Tchernigov in grief; woe streameth through the land, and pain, in full flood, through Russia.

(Then Igor unexpectedly returns. . . .)

The sun shines in heaven since Prince Igor is on Russian land. The maidens sing on the Danube, and their voices reach over the sea to Kiev. Prince Igor rides through the Boritcheoford to the Holy Mother of God of Pirogosha. The country is gladsome and the towns rejoice.

Perhaps one of the most romantic, as well as the most precious, things enshrined within the Russian Empire—notably in Georgia and the Balkan Slavs—is the cult of friendship. This ideal inspired one of the world's most noble epics, "The Man in the Panther's Skin," the national poem of Georgia, written by the great poet Rustaveli in the twelfth century, and still representative of the spirit of the people. The bond of friendship may be entered into between persons of like or opposite sex; if the latter, it excludes all possibility of marriage between the two friends. The tie is considered indissoluble, and its peculiar sacredness greater than that of the parental or marital bond,

since both these are constrained by necessity, while that of friendship is an act of purely mental choice—it is the bond of the soul. This ideal of friendship seems to be the special prerogative of small nationalities, by whom it is regarded as their strongest means of preserving and strengthening their national life.

The communal system, with the village as the unit, is even to-day the natural expression of the social life of the Russian people, and implies a simplicity, kindliness, and unworldly detachment of outlook entirely foreign to the individualistic materialism of the West.

"A large part of the peasant land is village property, used by all the villagers in common; the rest is divided, and from time to time redistributed, according to the ideas of equity of the whole village. An estimate is made of each family's claims, either at the death of its head, or at the time of a general census, and the family is allotted a certain proportion of the village ploughed land. But no person is ever allowed to claim a right to a particular piece of soil; he has merely the right to a certain quantity. There is no such thing as title and private ownership of the land itself, since it is not a product of individual labour, but a 'gift of God.' . . . The democracy is therefore profound, and rests on the feeling of full social and economic equality, which is the only sure foundation for democracy in any land" ("Russia's Message," by W. E. Walling).

The affairs of the village are conducted by the Assembly under the village head, who is regarded as the servant rather than the lord of all.

The constant and increased pressure of European economics and principles, the demand for landless labour in the towns, and the speeding up of agricultural methods in the country, will doubtless destroy all survivals of the old communal life, which is so fundamental an expression of one aspect of the Russian genius.

Whatever the gifts Western Europe holds out to Russia, we are convinced that it is Russia herself who, with a new gospel

of "great joy," will re-awaken the vision of a "new heaven and earth" in the way-worn hearts of the older nations.

Throughout the whole Russian Empire the soul of the Slavonic peoples is flashing out with new inspirations, new valuations, new ideals; chaotic yet creative—the vision of a child with the powers of a God: upheaving, now here now there, all laws, customs, securities—political, social, and moral—in its efforts towards self-realization. Russia, in her contributions to the world's achievements in science—Pirogof (medicine), Mendelieff (chemistry), Mechnikov (biology), Pavlov (physiology), Vinogradsky (bacteriology); in literature—Tolstoy, Turgenieff, Pushin, Bakunin, Kropotkin, Dostoyevski; in art—Verestchagin, Glinka, Repin; in music—Rubinstein, Rachmaninoff, Tchaikovsky—to mention a few giants in each, has already proved herself a giver of great men, of great thinkers, of great workers, and we need not question as to how far Polish or Jewish elements prevail—they are Russian. Yet, the genius of Russia—and this acts as a corrective to the astigmatism of the West—is towards the complete expression of the life itself rather than in a consolidated output as apart from personal living. The main aim of the Teutonic genius is to place before the public some definite, appraisable article, hall-marked with the name of the author, who from thenceforth is known rather by his goods than for himself. The joy of the Slav genius is to live fully, perfectly, carelessly, answerable to the dæmon within, scornful of the outside clamour for an output for public sale or fame. The Russian lacks stability, possibly a Tartar heritage, yet he is possessed with a basic patient persistence. He uses the license of barbarism and the restraint of culture with both hands at the same time. He knows instinctively that occasion is above law, and human nature above custom; that harmony is greater than order, and life than the forms of living. The Russian attitude towards the whole of life is intuitive, not rationalistic; in this it is in direct opposition to the German Teutonic, which uses reason to elaborate a de-human-

ized theory of existence, and patiently, persistently, marches towards the perceived goal, ignoring all the subjective circumstances which arise to qualify and modify the scheme of action.

In the recent prohibition of alcohol throughout Russia the people loyally acquiesced in the drastic action of the Czar. Although the Government had probably profited by the recent series of remarkable experiments in Sweden, which proved that alcohol, in even dietic quantities, diminished the average of marksmanship in rifle-shooting, the people simply knew that excessive spirit drinking had been the ruination of their army in morale, discipline, and efficiency. They are heart and soul with the Government in the prosecution of this war against Germany. To insure the victory that *must* be theirs, this curse *must* be lifted from their army—immediately, by any means—and therefore with one single-eyed vision, without wasting time or energy in profitless discussion as to the loss to the revenue or the coercion of the individual, they saw the vital, initial need, and, regardless of all minor considerations, arose and forced their country to be sober. No Teutonic nation could have acted so clearly, so greatly, so *will*-fully. Germany and England both lie writhing but powerless in the grip of a like evil; the Slav, with his Eastern vision, strikes boldly for the present necessity.

In this war the whole soul of Russia is hurling back the imposition of the mental slavery of Teutonic mechanicalism with which her freedom is threatened. Russians attribute much of the tyrannous misgovernment under which they suffer to the insidious influence and direct interference of German militarism; they look forward, when this is removed, to an era of expansion and readjustment under the freedom of a Government expressive of their own ideals.

It is noteworthy that such oppressed nationalities as Finland and Georgia have never striven for separation from the Empire, but only for a restitution of rights already granted them by the Imperial order.

Georgia has especial claims on the Russian nation. Converted to Eastern Christianity as early as the fourth century, unaided she fought for 500 years for the Faith against Persians, Turks, and other savage invaders. But for the high civilization she had already attained, she must have succumbed before the onslaught; but for the strength of faith, of character, then maintained and fortified, she could not have preserved, in the face of more recent trouble, the national vigour and clearly defined characteristics with which she faces the world to-day. The twelfth century was the golden epoch of Georgian civilization; she continued her national development unhindered until 1783. In that year her King, Heraklaus, made a treaty with Catherine II. of Russia, which guaranteed the complete independence of Georgia under the Russian protection. Russia sent her Ambassador to the Georgian Court at Tiflis, and the treaty was faithfully kept till 1801, when it was violated by the annexation of Georgia as a Russian province, and since then all the rights accorded to Georgia by the treaty of 1783 have gradually been taken from her. All that Georgia demands to-day is the restoration of these Treaty Rights, that she may be free to express her individuality under the protection of the Russian Empire. She feels the more entitled to consideration, inasmuch as in the long campaign against the Turks and Persians, during the period of Russian expansion towards the south, it was the Georgian assistance which gave the victory ultimately to Russia. Georgia to-day furnishes the Russian Army with its most brilliant officers, to the number, in the present war, of about 1,500; besides these, there are 300,000 Georgian regulars and reserves in the Imperial Army.

Finland, too, with the prospect of autonomy, looks to the restitution of its Great Charter of Liberty, whereby in 1809 her first Grand Duke, Czar Alexander I., guaranteed her complete self-government within the Empire, not "subject to Russia," but "attached to her" by her "own evident interests."

The Empress Marie, returning to Petrograd, through Finland, at the beginning of the war, was received everywhere with acclamations and expressions of sympathy by the Finns, and while in Helsingfors showed her appreciation of their loyalty by commanding an escort of Finns instead of Russians, and preferring Finnish, rather than Russian, national music to be played in her honour. We can hope that the incident is significant, and attests a real desire on the part of the Czar that the promise of autonomy made to Poland should be also fulfilled towards Finland.

The right of small nationalities to their freedom is the avowed principle for which the Allies entered upon this great war. The proof of the sincerity of their respective Governments will be established only if, in the readjustment following upon their victory, the rights of internal self-government, of which those smaller nations have been dispossessed, are ungrudgingly restored to them in their entirety.

Freed from the German obsession of uniformity, we may look for the spontaneous welling up of every variety of national life within the vast Empire of the Great White Czar. We can trust the instinct, we can trust the vision, of the Russian people. Whatever the tyranny of their Government, the iron has not entered into their soul; the bodies may sometimes be scarred, but the soul roams free, striving untiringly for expression, with the message bursting with joy, with life, with energy, on its lips: "Behold, I make all things new."

PROCEEDINGS OF THE EAST INDIA ASSOCIATION

THE GODS OF THE HINDUS

BY R. A. LESLIE MOORE, I.C.S.(RETIRED)

I SHOULD like to state that this paper is an expansion of one I wrote for the *Times of India* about two years ago.

Two-thirds of the inhabitants of India are Hindus, and their religion is one of the oldest known to men. It can be traced back to its original sources in still existing records, chief of which are the four Vedas, the Itihases and Puranas, and the Institutes of Manu. Of the four Vedas—the Rig, Yajur, Sama, and Atharva—the first-named, the Rig Veda, is the earliest. Competent research has ascribed the composition of the Rig Veda to some time about 2500 B.C., but a recent writer, Mr. Bal Gangadhar Tilak, in his book “The Arctic Home in the Vedas,” moves back the date to about 6000 B.C.—say about two thousand years before the creation of the world, according to the Authorized Version of the Bible.

The religion inculcated by the Vedas is polytheistic and non-idolatrous, deifying the primeval forces of Nature and natural phenomena. Idolatry was introduced into Hinduism at a later date, and was probably due to the contest between the original Aryans and the less civilized inhabitants of Eastern India, when the former advanced eastwards along the course of the Ganges from Afghanistan to the Punjab, Oude, and Agra.

The Rig Veda declares the deity Prajapati to have been the Creator, and represents him to have created the universe out of nothing by means of contemplation and the practice of austerities.

In later times Prajapati became Brahma, one of the Hindu triad. But the chief Veda gods were Indra, Agni, Soma, and Varuna-Mitra.

The principal of these was Indra. He is described as the "Ruler of Heaven," who slew the demon Vritra. He refreshed himself with libations of Soma offered by his worshippers, rode through the heavens in his golden car, and destroyed his enemies with thunderbolts (Vajra) forged by Tvashtri, the Indian vulcan. He is the personification of the sky.

Next in importance comes Agni. Agni signifies fire.

He is the god of the sacrificial fire and the conveyer of the Soma sacrifice to the gods—hence the intercessor with the gods for men.

Now Agni may be identified with Rudra, who is termed the "lord of sacrifice."

Rudra's sons are the Maruts (the genii of the winds).

He is invoked as the god of tempests, "with braided hair," and is termed the "wild boar of the sky." He is further described as "tawny," "fair complexioned," "with a many-hued necklace," and finally is called the "Bull."

Undoubtedly he at a later date became identified with *Siva*, who is not mentioned by name in the Vedas, but to whom many of Rudra's attributes are assigned. Siva was, no doubt, one of the aboriginal gods of Eastern India.

Vishnu, however, does obtain mention as the "friend of Indra," close allied to Indra.

It is written of him :

"Through all the world strode Vishnu. Thrice his foot he planted, and the whole world was gathered into his footsteps' dust."

This description is generally considered to apply to the sun at dawn, noon, and sunset.

Mr. Bal Gangadhar Tilak, however, is of opinion that the three footsteps of Vishnu were planted in earth, heaven, and the nether regions.

Soma is a deification of a plant producing an intoxicating

drink much used at sacrificial ceremonies. Probably his worship fell into disuse owing to the increasing scarcity of the plant.

Varuna-Mitra, a twin-god, represented the sun respectively by night and day.

Mitra disappears from Hindu mythology, possibly because the torrid heat of the Indian plains was displeasing to the Aryan immigrants from the north.

He obtained prominence in the Zend-Avesta, the Scripture of the ancient Persians.

Varuna developed into the God of Waters, which are considered as the abode of darkness.

In the Rig Veda the gods are said to be thirty-three in number—a contrast to the numberless deities of modern Hindus, many of whom have been adopted from tribes taken into the fold of Hinduism.

Besides the principal Vedic deities already mentioned, the following goddesses may be named : Ushas (the dawn), Aditi (space), and Sarasvati or Vach (the goddess of speech).

One more Vedic personage may be noted—Manu, the progenitor of mankind.

It is related that Manu caught a small fish, which begged for its life and promised a reward for its preservation.

The patriarch put it into a jar of water, but soon it outgrew the jar.

Thereupon he restored it to its native element.

After this there ensued a universal deluge, but Manu took refuge in an ark, which was towed over the face of the waters by a rope attached to the horn of the friendly fish.

At last, on the subsidence of the flood, the ark grounded on a mountain-top.

Manu alighted and sacrificed to the gods.

To him appeared a fair maiden, Ida by name, whom he took to wife, and from the pair descended the human race.

It may be noted that in a post-Vedic Scripture, the great epic poem, entitled "*The Mahabharata*," by Vyas, Vishnu

and Siva are represented as in rivalry. But subsequently speculative thinkers came to look on both of them as emanations of Brahma, and then upon all three deities as one, emanating from the eternal, all-pervading Spirit of the Universe, Brahm.

Thus the polytheistic religion of the Vedas at a later age became transformed into a pantheism which identifies the world as god and god as the world.

As has been said by an old writer on Hinduism :

“Brahm's creative and preservative powers appear in Brahma and Vishnu, while Siva is the emblem of his destructive energy—not, however, of absolute annihilation, but rather of reproduction in another form.”

In metaphysics Brahma represents matter, Vishnu spirit, and Siva time, while in natural philosophy they stand respectively for earth, water, and fire.

Each of these personages is supposed to have a consort, the performer of his will, known as his Shakti.

Nowadays the mass of Hindus are divided into two great sects—the Vaishnavas, or adherents of Vishnu, and Saivas, the followers of Siva.

BRAHMA.

Brahma, the creative power of Brahm, the Universal Spirit, no longer has temples especially dedicated to his worship, perhaps because no peculiar benefit can be expected by his worshippers, as the work of creation is over and past. But as the first person of the Hindu triad of chief deities, some description must be given of his attributes.

Thus it is said in the sacred writings of the Hindus that all material forms existed in Brahma, and their germs were produced by him.

From his mouth sprang the priest (Brahman), from his arm the warrior (Kshatriya), from his thigh the trader or cultivator (Vaisya), and from his foot the serf and labourer (Sudra).

The sun sprang from his eye, and the moon from his mind.

He is depicted with four faces looking to the four quarters of the universe, and four arms.

In his hands he holds the Vedic script, a lustral spoon, a rosary, and a vessel containing water for ablutions preliminary to prayer and sacrifice.

His Shakti is the goddess Sarasvati, deity of speech, of harmony, and the arts.

Brahma's conventional steed is the wild goose, and that of Sarasvati the peacock.

VISHNU.

Vishnu is the second person of the Hindu triad.

He represents the preserving power of Brahm; and probably has more worshippers among the Hindus than any other deity, whether in his original form or those of his avatars (incarnations).

He is a personification of the sun. He is also said to represent water or the humid principle generally. Thus he is also identified with air. Again he stands for space, and his colour is blue, its apparent tint.

His Shakti is the beauteous Lakshmi, goddess of prosperity, and his steed is Garuda, the man-headed eagle, mounted on whom he soars to the skies.

His symbol is the triangle with the apex downwards, as to descend is the property of water.

The chief avatars (incarnations) of Vishnu were ten in number, as follows :

1. Matsya (the fish).
 2. Kurma (the tortoise).
 3. Varaha (the boar).
 4. Narsingh (the man lion).
 5. Vaman (the dwarf).
 6. Parasa Rama
 7. Rama
 8. Krishna
 9. Buddha
 10. Kalki (yet to come).
- } names of personages.

The details of these avatars are briefly as follows, as stated in post-Vedic times.

MATSYA.

In the days of Manu mankind became corrupt, and was in consequence destroyed by a universal flood.

But by the favour and command of Vishnu, Manu, the seven Rishis (holy sages), and their wives, accompanied by pairs of all living creatures, entered into an ark.

Then Vishnu assumed the form of a fish with a monstrous horn, to which the ark was moored by a cable composed of a serpent, and thus outrode the flood.

On the subsidence of the flood Vishnu and Brahma slew a monster named Hyaglava, who had stolen the Vedas. These were restored to mankind. Which is an allegory, signifying that mankind in general was destroyed because the guidance of the Scriptures had been neglected, but a pious remnant was saved by the favour of God.

KURMA.

To recover the treasure lost in the universal flood, Vishnu became incarnate as a tortoise. On his back was placed a mountain, round which was coiled a serpent, and the gods on one side and the demons on the other with this implement churned the depths of ocean.

They recovered from the waters fourteen treasures :

1. The moon.
2. The goddess Lakshmi.
3. Wine.
4. Uchislas (an eight-headed horse).
5. Kustabha (a priceless jewel).
6. Parifat (a tree that yielded everything desired).
7. Surabhi (a similarly bountiful cow).
8. Dhanvanvara (a physician).
9. Kavat (the three-trunked elephant of Indra).
10. Chank (a conch conferring victory on whoever blew it).

11. Danuth (an unerring bow).
12. Bikh (poison).
13. Rhemba (a beautiful Apsara).
14. Amrit (the nectar of immortality).

It may be noted that as the Bikh threatened further injuries to mankind, Siva intervened on their behalf and swallowed the poison, which had the effect of staining his throat blue—one of his characteristic marks.

VARAHA (THE BOAR).

The story of this incarnation is as follows :

A Daitya (demon), by name Hiranyaksha (golden-eyed), by the practice of austerities obtained from Brahma the double boon of universal sovereignty and of immunity from injury by noxious animals.

These latter he enumerated, but forgot to mention the boar.

Intoxicated with evil pride, he seized the earth and plunged it under the sea.

Vishnu came to the rescue by becoming incarnate as a boar.

He entered the depths of ocean, and after a struggle of a thousand years with the demon, whom he slew, emerged with the earth fixed on the points of his tusks.

This story is obviously a myth referring to a deluge.

NARSINGH (THE MAN LION).

Another Daitya, named Hiranya Kasipa, similarly obtained from Brahma the boon of universal sovereignty and of exemption from death by means of God, man or animal, by day or night, within doors or without, with the usual result that he became impious and arrogant.

One day at sunset he entered into an argument with his virtuous son as to the omnipresence of the deity, and demanded whether God was present in a pillar that stood at the threshold of his house.

Receiving an affirmative answer, he smote the pillar with his sword to show his contempt.

Then the column burst asunder, and Vishnu emerged in a form half-man, half-lion.

Seizing the impious wretch, he tore him asunder on the threshold at the moment the sun was setting.

VAMAN (THE DWARF).

Maha Bali was a virtuous monarch, whose head, however, was so turned by prosperity that he omitted to offer the essential oblations to the gods.

To punish him, Vishnu became incarnate as a Brahmin dwarf.

Appearing before the Raja, he asked as a reward for the performance of austerities as much space as he could cover with three steps.

Maha Bali assented, and to ratify his promise poured water on the suppliant's hand.

When the water touched him, the dwarf expanded till he blotted out the horizon.

With one step he traversed earth, with a second heaven, and with a third pressed Maha Bali down into Patala (the nether regions).

This legend is a version of the "three steps of Vishnu," described in the Veda, and obviously refers to the daily progress of the sun at sunrise, noon, and sunset.

PARASA RAMA.

Parasa Rama, son of the Rishi Jamadagni and his wife Raneka, was born near Agra.

The Rishi had been entrusted by Indra with the care of the boon-granting cow Surabhi, and her the tyrant Raja Dhiraj attempted to seize.

In the ensuing struggle Jamadagni was slain, and Surabhi was caught up to the celestial regions.

Raneka resolved thereupon to become a Sati, and before she was consumed on her husband's funeral pyre

cursed Dhiraj and enjoined her son to avenge his parents.

In answer to the Sati's prayers Vishnu became incarnate in Parasa Rama.

The latter, after fighting a score of battles with Dhiraj, finally defeated and slew him, annihilating at the same time the Kshatriya caste, of which Dhiraj was the leader.

This legend no doubt preserves the memory of an actual conflict between the two leading castes, the Brahmins and Kshatriyas.

RAMA OR RAMCHANDRA.

This heroic incarnation of Vishnu won as his bride the peerless Sita, adopted daughter of the Raja Janaka, by hitting a mark with an arrow from the bow Dhanuth, which none but Rama could bend.

One of his defeated rivals was Ravan, the ogre King of Ceylon, a monster with ten heads and twenty hands. Subsequent to the marriage Ravan carried off the fair Sita to Ceylon, but after a fierce contest she was restored by Rama with the aid of Hanuman and his monkey followers.

The so-called monkeys are believed to have been aboriginal tribes friendly to the early Aryans.

After Sita had emerged unscathed from an ordeal by fire, intended to test her chastity, she was taken back by her bridegroom. This story is the subject of Valmiki's great epic poem, the "Ramayana."

KRISHNA.

Krishna is the favourite incarnation of Vishnu among Hindus.

His mortal parents were Vasudra and Devaki, sister of the Raja Kansas.

The latter—the Raja Kansas—was informed by a sooth-sayer that his pregnant sister would bear a son destined to slay him.

He placed a guard over Devaki, intending to kill the infant as soon as it was born.

But Devaki's husband Vasudra, evading the vigilance of the guards, escaped across the Jumna with the new-born babe.

As he crossed the stream, the water rose till it kissed the infant's feet, and then sank again to aid Vasudra's crossing.

Thus was testimony borne to the divine origin of Krishna.

When Kansas heard that the infant son of his sister had been carried away, he ordered a massacre of the infants (as did Herod in after ages), in the hope that the babe might meet his death.

Krishna, however, was in safety far away, entrusted to the keeping of a herdsman, Ananda, and his wife, Yasuda.

He passed his childhood and youth piping, dancing, and sporting with the young cowherds and milkmaids (Gopis). While yet a child he destroyed the serpent Kaliya, emulating the infant Hercules.

When only seven years old he protected his rustic friends from a deluge of rain sent down by Indra to punish them for neglecting his sacrifices while adoring Krishna.

This he accomplished by holding over them the mountain Goverdhan torn up from its roots.

On another occasion a number of maidens had assembled together to celebrate his incarnation by dancing. He provided each of them with an attendant swain by multiplying his own personality.

Another of his superhuman feats was the rescue of the children of Kasya, Krishna's Guru (spiritual preceptor) from Yamapuri (the City of the Dead).

He did this at the entreaty of their mother, and to do so first fought and slew the Sea demon Sankasara, whose magic conch he seized as the spoils of victory.

With its blast he frightened Yama, ruler of the nether regions, into surrendering the Guru's offspring.

The lives of Krishna and Radha are famous, and are the subject of a pastoral drama entitled "*Gita Govinda*," by Jaidav, who wrote before the Christian Era.

Their attachment is said to signify the reciprocal attraction between the Divine Goodness and the Human Soul, much as the Song of Solomon has been interpreted in a religious sense.

A common appellation of Krishna is Murlidhar, the flute-player, for he is credited with the invention of the flute, just as Apollo is said to have originated the lute.

And just as the object of Apollo's admiration, Daphne, was turned into a laurel, so a nymph became the Tulsi, or basil, sacred to Krishna.

BUDDHA.

Gautama Buddha is said by Hindus to have been an avatar of Vishnu.

The god apparently took upon himself this incarnation in order to reclaim the Hindus from their early proneness to sacrifices of blood—the slaughter not only of animals, as in the Asvamedh, but even of men, as in the Naramedh.

According to the flesh, Buddha was the son of a Raja of Kailas.

When a youth he gained in marriage Vasutara, daughter of Raja Chuhiban, by bending a bow beyond the strength of all other suitors for the maiden's hand.

Thus did Rama win the fair Sita, and Odysseus performed a similar feat, not to win a bride, but to rescue his faithful wife Penelope.

Even at his birth Buddha was clearly set apart for a high destiny by the marks resembling wheels or the sun on the palms of his infant hands.

A figure of Buddha is to be found in the Gharipuri caves or Elephanta among the numerous images of celestial beings worshipped by Hindus.

KALKI.

This incarnation is yet to come.

It is believed that Vishnu, mounted on a white horse and wielding a naked sword, will come in radiant glory to end

the present Kaliyuga, and usher in an age of purity throughout creation.

With this may be compared the passage in the nineteenth chapter of St. John's Revelation, where the apostle writes of a Divine being seated on a white horse making war in righteousness.

The third person of the Hindu triad must now be described.

SIVA.

This is Siva, often said to be the destroying power or attribute of Brahm, the Universal Spirit.

More correctly he may be termed the power of reproduction.

For Hindu philosophy rejects the idea of annihilation.

It regards destruction as really a rearrangement of indestructible atoms, and therefore in its essence the same as reproduction.

Siva represents time, and his symbols are the sun, fire, and the ling or phallos, the type of reproduction.

His consort is Bhavani, who under the name of Prakriti represents created nature. Bhavani has a steed of her own (the tiger), thus differing from most other Shaktis.

Siva rides on a bull (the Nandi), white like himself, and representing divine justice.

The god's locks are ruddy.

He carries in his hands a trisul (trident) and a pash (a rope for binding and strangling criminals).

In his forehead is a third eye, and round it the mark of a crescent moon, while his neck is wreathed with serpents, the emblem of eternity, and is encircled with a garland of human skulls.

On his head he wears as ornaments Ganga (the holy river), Chandra (the moon), and Sesh Nag (the prince of serpents).

(It may be noted that Hindus consider great spiritual benefit may be gained by drinking the water of the Ganges,

and still more by dying on its banks. If death occurs at the point where the Ganges, the Jumna, and the Sarasvati unite—the latter flowing underground invisible to human eye—the deceased attains beatitude at once, without the trial of further metempsychosis.)

As already stated, Siva's colour is white, while Brahma is represented as red, and Vishnu dark blue.

Siva's three eyes denote his view of time—past, present, and to come.

As he is identical with fire, his symbols all point upwards, as, for instance, a triangle with apex upwards, an obelisk, or a pillar.

To conclude this account of the god, the similarities between him and the Grecian deity Zeus may be noted.

Both dwelt on mountain-tops, Siva on Kailas, and Zeus on Olympus.

Both repelled the attacks of rebellious monsters, Siva those of the Daityas, while Zeus overwhelmed the Titans. Finally, both defeated their foes by like methods, Siva by showering on them fiery shafts, and Zeus by hurling thunderbolts.

SHAKTI.

Each of the three persons of the celestial triad of the Hindus has a consort Shakti, who is a personification of his energy, an active performer of his will.

Thus the consort of Brahma is Sarasvati, and those of Vishnu and Siva respectively Lakshmi and Parvati.

These goddesses may now be described.

Sarasvati.

Sarasvati, the consort of Brahma, is the goddess of imagination, invention, and speech, the patroness of the arts.

Her name signifies "flowing," an epithet applicable both to eloquence and to the mysterious river called after her.

She is depicted as riding on a peacock, and carrying a *vina*, a sort of Oriental lyre.

Lakshmi.

The beauteous Lakshmi, consort of Vishnu the preserver, is the goddess of riches and prosperity.

It may be noted that the Deccan peasants call their cattle Lakshmi. Reversing the order, the Latin word *pecunia* was derived from *pecus*, a herd of cattle.

So highly do Brahmins reverence the cow that they will feed the animal before breaking their own fast, and releasing a cow is part of the ceremonies of marriage, while cow's urine is held to be the greatest of all purifiers.

It is related that when the gods and demons combined to churn the ocean after the deluge, one of the treasures drawn from the waves was the fair Lakshmi. The goddess is sometimes depicted as holding in her hands the conch and discus of her lord, Vishnu.

She shares with him his steed, the man-headed eagle Garud.

Parvati.

Parvati, the spouse of Siva, is also called Bhavani, Durga, Kali, and Devi.

Under the name Bhavani she represents the power of fecundity, and in this form especially is considered the Shakti of Siva the reproducer.

As Durga she stands for valour united with wisdom.

It was as Durga that she slew the buffalo demon Mahisasur, after whom the Hindu State of Mysore is called.

But in her character of Kali or Devi she was, in ancient days, the recipient of human sacrifices.

Thus the Kalika Puran says :

"By a human sacrifice attended by the forms laid down Devi is pleased one thousand years, and by a sacrifice of three men one hundred thousand years."

It is stated in the same Puran that an enemy may be immolated by proxy through the substitution of a buffalo or goat, which should be called by his name throughout the ceremony.

Kali was the patron goddess of the Thugs of old, and is the favourite deity of modern Hindu anarchists.

The chief "shaktis" of the gods have now been described, and it remains to mention the principal minor deities of the Hindu Pantheon.

First among these comes Ganesh, or Ganpati.

GANESH.

Ganesh is the god of prudence and policy, to be invoked at the beginning of all enterprises.

He is depicted as riding on a rat, and is said to be the son of Siva and Parvati.

Pictures and images always represent him as having an elephant's head.

This may be an indication of his sagacity, but there is a legend that accounts for it in another way.

It is said that in days of yore the great god Siva went a-hunting.

On his return to the abode of his spouse, the gracious Parvati, he found his entrance barred by his son Ganesh. The latter had been set to watch the door while his mother bathed.

Impatient of obstruction, Siva struck off his offspring's head.

Parvati, emerging from her seclusion, found him lying headless, and assailed her lord with bitter reproaches.

Smitten with remorse, Siva plunged into the forest, and slaying the first animal he met—which happened to be an elephant—he cut off its head, and hastening back fixed it on Ganesh's shoulders, thus recalling him to life.

Ganesh has two wives, Siddhi and Buddhi, daughters of Vishvarupa. His brother Kartikaya was his rival for their hands.

It was agreed that whichever aspirant could first traverse the earth should win the maidens for his brides.

Kartikaya, all eagerness, set forth, but before his return Ganesh, by ingenious arguments, persuaded his prospective

father-in-law that he had already accomplished the task (which he had not troubled to attempt), and thus gained the much desired prizes.

On another occasion six of his fellows conspired against the Rishi Gautama.

At their instigation Ganesh became incarnate as an emaciated cow, and in that shape provoked Gautama to anger.

The angered Saint smote the feeble animal with a blade of grass—not an act of extreme violence, but sufficient to quench its flickering spark of vitality.

Gautama was at once plunged in horror and remorse when he saw the sacred animal dead at his feet (for to slay a Brahmin or a cow are the greatest sins possible for a Hindu).

But Siva, knowing the artifice by which he had been entrapped, pardoned the repentant sinner and purified him by pouring on him the waters of the Ganges from his ruddy locks.

INDRA.

Indra was the chief of the Vedic deities. He is described by an old writer as “the personification of the firmament, the god of thunder, with inferior genii under his command.

He rules over the eastern quarter of the world, and is chief of the celestial bands stationed on the summit of Mount Meru, where he entertains the gods with draughts of nectar and heavenly music.

He is called the lord of wealth because he possesses the all-yielding tree, Pariyatak, and the all-producing cow, Kamdanu.

His steed is the elephant Indravati, the trunk of which is the waterspout. His bow is the rainbow (which it is unlucky to point out), and he rules over winds and showers.

He is said to be covered with eyes, and hence is named “the thousand-eyed.”

But in post-Vedic scripts he seems to have fallen from his high estate. For therein he is described as profligate and jealous of sacrifices offered to other deities, as, for instance, when he attempted to overwhelm the rustic worshippers of the youthful Krishna.

He is even called Sakra, as an adviser of evil.

HANUMAN.

Hanuman is said to have been the son of a Brahmin woman named Anjeni, granted to her as a boon by Mahadev (Siva) in answer to her prayers and offerings.

His reputed father was Pavan, chief of the Maruts, or genii of the winds. Hence he is known as Maruti—his common designation in the Deccan, where his images adorn all villages of any size, and where he shares with Ganesh the chief favour of the Mahratta peasants.

Hanuman was the chief ally of Rama when the divine hero invaded Ceylon to recover his ravished bride from the grasp of the monster Ravan. He brought with him a tribe of monkeys (Hanuman's images generally represent him in the form of a monkey), which not only fought bravely against the demon hosts of Ravan, but built the bridge between India and Ceylon by which Rama's army passed over the intervening waters.

Indeed, he saved Rama and his host from defeat. For when they had been laid insensible by the enchanted weapons of Ravan, he repaired to Dangiri, a hill in Northern India, where alone was to be found the shrub Sanjivi, by which they might be restored to consciousness.

This herb was to be identified by a lamp placed under it. But the malignant Indra, ill-affected towards the avatar of Vishnu, had placed a lamp under every shrub on the hill.

Hanuman, however, was not to be baffled.

Tearing up the hill by its roots, he bore it to Ceylon, and the leaves of Sanjivi restored the strength of the prostrate hero and his followers.

Two deities remain to be described,—Kama and Yama, the gods of love and death.

KAMA.

Kama is the Hindu god of love. He is the son of Maya (Illusion) and wedded to Reti (affection).

His bosom friend is Vasant, the spring.

Thus does the poetry of East and West agree, for did not Tennyson write :

"In the Spring a young man's fancy
Lightly turns to thoughts of love"?

Kama rides on a parrot and his banner displays a fish on a red ground.

His weapons, like those of Cupid, are arrows, five in number, tipped with flowers supposed each to affect one of the five senses.

Chief of these is the strongly scented Champak.

YAMA.

As death is the end of all things, a mention of Yama may fittingly conclude this account of the gods of the Hindus.

Yama rules the South or Lower world where Hindus locate the infernal regions. He has two dogs, named respectively Kerbura (spotted), or Trisiras (three-headed), and Syama (black), names that recall the classic Cerberus.

His city is Yamapuri, and there the soul repairs immediately on quitting its tenement of clay.

According to the sentence of Yama it ascends to Swarga (the heaven of Indra) or descends to Naraka (the snaky hell), or returns to earth to reoccupy a material form, whether animal, vegetable or mineral.

But even Yama is not invincible, for Krishna, rescued from his gloomy realm the children of Kasya, and Mahadev, (Siva) springing out of the image of the Ling, repelled him when, mounted on his steed (the buffalo), he sought to seize Mahadev's adorer the devout Markandaya.

DISCUSSION ON THE FOREGOING PAPER

At a meeting of the East India Association, held at the Caxton Hall, Westminster, S.W., on Monday, November 9, 1914, a lantern lecture was delivered by Mr. R. A. Leslie Moore, I.C.S. (retired), entitled "The Gods of the Hindus." Sir Andrew Wingate, K.C.I.E., was in the chair, and the following ladies and gentlemen, amongst others, were present: Sir Charles Lyall, K.C.S.I., Sir Arundel T. Arundel, K.C.S.I., Sir Mancherjee M. Bhownagree, K.C.I.E., Sir Samuel Swinton Jacob, K.C.I.E., C.V.O., and Lady Jacob, Colonel C. E. Yate, C.S.I., C.M.G., M.P., Surgeon-General Evatt, C.B., Mr. G. C. Whitworth, Mr. J. B. Pennington, Mrs. Herbert Pennington and Miss Pennington, Mr. R. F. Chisholm, Colonel McCausland, Lady Wilson, Mrs. R. A. Leslie Moore, Mr. and Mrs. West, Mrs. Fraser, Miss Leask, Mr. D. N. Reid, Mr. G. M. Ryan, Mr. K. S. Jassawalla, Mr. and Mrs. Wilmot Corfield, Miss Corfield, Mrs. Eckstein, Mr. H. Kelway-Bamber, M.V.O., and Mrs. Kelway-Bamber, Colonel A. S. Roberts, Mr. and Mrs. James Macdonald, Mrs. Phillips, Miss Andrews, Mr. H. R. Cook, Mrs. Cook, Miss Silvar, Mrs. and Miss Bean, Mrs. Drury, Mr. H. Woodward, Mrs. Henderson, Mr. Khaja Ismail, Mr. Reddy, Mr. F. H. Brown, Mrs. Jackson, Miss Ashton, Mr. C. Bunbury, Dr. Bhabha, Mr. Dean, Mr. T. Everatt, Miss Hallward, Miss Macleod, Mr. W. F. Holms, Mr. S. Abu Ali and friend, Mrs. Harte, Mr. John R. Marsh, Miss Webster, Mrs. Walsh and three friends, Mr. Colman P. Hyman, Miss Wade, Mr. and Mrs. Rustom P. Jehangier, and Dr. J. Pollen, C.I.E., Hon. Secretary.

The CHAIRMAN: Ladies and gentlemen, the subject of our lecture this afternoon is, as you are all aware, "The Gods of the Hindus." It is a somewhat wide subject, and as far as I can judge from the paper it has been very ably treated. I will not at this stage say anything about the paper, but will merely introduce to you—although I do not think that is necessary—the lecturer, Mr. Moore, a name very well known, and that of an officer with whom I have had the privilege of working on various occasions; a man very strong, capable, upright, and conscientious; one of those men who have left a good name behind them in India, and I do not think there is any reward we can have for our service better than to be shined in the hearts of some of those Indians for whom we have worked. (Hear, hear.)

The LECTURER: Ladies and gentlemen, I should like to state first of all that this paper is an expansion of one that I wrote about a couple of years ago for the *Times of India*. I think that acknowledgment is necessary.

The lecture was then read, and received with applause.

The CHAIRMAN: I think that hearty response shows that we have all appreciated this paper, which has been prepared with so much care and elaboration. I understand that there are many people here well acquainted with the "Gods of the Hindus." I cannot claim that knowledge myself, but I have been greatly interested in the paper, which is full of suggestive thought. There are others who I hope will say a few words afterwards, but I will merely mention one or two points which have occurred to me. One is that the Vedas are supposed to be as old as 2500 B.C. That took me a little by surprise, as I thought 1500 B.C. was about the date.

Then, I think, we must all be conscious of a certain feeling of sadness as one reads carefully and with sympathy that there was originally the idea of one God—at all events, as near as possible—and it passes into more multiplied forms, and from the pure into the impure. After a time the number of gods grows to thirty-three, and I believe now there are an immense number. I suppose that has been taken from the idea of having a census of the heavenly population, not altogether all gods, but merely including all people supposed to be in the heavenly regions. Then we are told the original Deity created all things out of nothing. That is in harmony with the Bible account, and also with the most recent ideas of scientific men, that things that are seen are created out of an immaterial spiritualized sort of thing. It rather astonishes one to be told that the Creator created by the practice of austerities, and that He performed ablutions preliminary to prayer and sacrifice. One would have supposed from these remarks that there must have been some higher deity to be propitiated by the austerities and by the prayer and sacrifice. There may be an explanation of that, but there is another imperfection that strikes one. We are told that from the mouth springs the Brahmin, and from the feet the Sudra. One remembers what St. Paul said about the body, that all the members are coequal; but here it looks as though the head of the god is superior to his feet. That would indicate a certain imperfection somewhere or other—at least, there is the idea of imperfection. To us it is a contradistinction to the great idea of the present day that all men are brothers. When you get men springing from the superior and the inferior parts of the god, it annihilates the idea of the Fatherhood of God and the brotherhood of man, two of the great ideals of the present day—at all events to us.

Then I was rather interested in those pictures to notice how the power depends upon the cobra (or serpent). Visiting temples in India one frequently saw that either the god is seated upon the serpent, or there is a halo of serpents around his head, or he is holding the serpent in his hand as the sceptre of power. That takes us back to ancient times, where the serpent apparently was originally the object of adoration in India.

One finds it underlying adoration everywhere. I remember a Brahmin who gave me the picture of a cow (probably it was to educate me in the sanctity of the cow). It had all the gods and goddesses in different parts of it, and I looked at it with great care, as I was always interested in the Cobra theory. I studied the cow, but I could not find the serpent anywhere, and so at last I said to my friend the Brahmin: "Where is the cobra?" He said: "Of course it is there." And I said: "I cannot find it." Then he pointed it out very cunningly devised in the tail of the cow.

Most of you will know that at Benares the Worshipper there may be seen on the banks of the river always holding the tail of the cow in his hands as he confessed his sins and gets absolution.

Then, again, the lecturer mentioned the blue-coloured throat as connected with Vishnu. That reminds me of a story told by one we all know—Sir George Grierson. He found a tribe in Northern India—a few of them were Christians—and they said that God was blue. Sir George was very much concerned about this, and they produced their translation of the Lord's Prayer, and he found out that "Our Heavenly Father" had been translated as "Our Sky-blue Father," the word for heavens being sky-blue. That just shows how very easily those ideas can creep into religion—just a mistranslation or a mistake.

Then there was something in the incarnation of the boar that caught my attention, namely, that the demon seized the earth and plunged it into the sea. Anyone who has been in the Himalayas will have noticed those ridges of sand-waves on the rocks, looking exactly as if it was sea-sand thrown up in different places, and I suppose those old Indians of that bygone time had brains as well as we have, and thought over things carefully, and came to the conclusion that the earth had been under the sea at one time; and not being able to account for it by writing a geological treatise, they invented the story of the boar, which explains the whole of these things that we see to-day. Another point occurred to me in connection with the presence of God in the heap of metal. That recalled to me an instance in my own life. I was in Rajputana doing some land work that took me to the wells, and I came to a new well which had been blasted out of blue stone rock, and after looking at the well from the business point of view, I noticed a little shrine by the well, a block of the blue stone put there with some red paint over it, and the usual rice and other things in front. So I said to my cultivator: "I see you are starting a shrine here, but you might have got a better bit of stone than that." "Oh," he said, "the deity is in that stone—the evil deity." I said: "Well, why?" And he replied: "This well has cost us two thousand rupees to make, and my father had a tremendous struggle to get to the water. Over and over again we went down, and no water; but at last it came, and my father said: 'Just let me down once more to look at my well,' and we two sons got him into the bucket and lowered him down, and after he had taken a look round at his work he said: 'Now then, haul up,' and as he spoke those words that stone leaped out of that hole, which you can see, and struck my father fair upon the head and killed him. We

took that stone out, and we brought it up here, and we have worshipped it ever since!" I said to him: "But that was an accident, was it not?" And he said: "Listen to this. You see where that stone was; the place is only 3 or 4 feet from the top. As you have noticed, the well has been blasted and blasted right down to the bottom, and that stone never moved before, but at that last moment out jumped that stone." I could not convince him it had been an accident, and I believe now you will find that a small shrine has been built, and no doubt it is quite a famous deity. That shows how a thing comes about through perfectly natural causes.

In conclusion I would like to say one word about Rama and Sita. I have always looked on Rama and Sita as one of the uplifting stories of Hindustan. When at Agra we look at the Taj, we cannot but feel that that lovely building, that has withstood the centuries, and has never been marred by riot or war, continues to be the representation and type of the power of one good honest capable woman over the most powerful of men. Sita is just a similar type for the Hindus. She comes down as the example of pure honourable womanhood, and I have thought over and over again in India that just as we have learned from the stories of these gods, how they gradually tend to lower and lower levels as time goes on even into impurity, so I believe the men of India would have long ago been lost had it not been for the noble womanhood of India. (Hear, hear.)

Now I will call on Sir Arundel Arundel to make a few remarks.

SIR ARUNDEL ARUNDEL wished to express his concurrence with what the Chairman had said with regard to the very great interest of Mr. Moore's paper.

What had occurred to him with respect to this subject of the paper was this: How were they to secure a knowledge of what the philosophers called "the reality that lies behind appearances"? They wanted to find out the meaning of these Hindu representations, and it was a most difficult task. There was a novel by the late Charles Reade called "Put Yourself in His Place." The words of this title indicate a clue to success, and it must also be remembered that there is no *necessary* connection between a symbol, possibly crude or even repulsive, and the thing or faith symbolized. One of the representations on the screen was of the god Ganesh, with the elephant head. To those who had not been in India, it seemed a repulsive idea that worship should be given to a symbol of this character, and yet the figure of Ganesh was worshipped from Nepaul in the Himalayas to Cape Comorin in the far south. The crudeness of the symbol of this representation of practical wisdom in no way affected the faith of the worshipper. He had a vivid memory of a wayside incident which he saw the last time he was in Benares a good many years ago. Walking along a narrow street, he saw in a bend of the road an image of Ganesh, black and dirty from the libations of oil poured over it. As he looked there came by a poor, old, sad-faced widow, wearing a common white cloth over her shaven head; and as she passed she stopped in front of the black, grimy figure, placed a few little yellow flowers before it, and

passed on. He had never forgotten the impression left by that scene on his mind. The symbol might be crude or grotesque to the stranger, yet this poor, sad woman, on whose life there had been more shadows than sunshine, made through it her offering of faith and hope in a divine wisdom.

To pass to another instance. Take the famous shrine of Juggernath at Puri, in Orissa, which was visited every year by hundreds of thousands of pilgrim worshippers. He produced a rough oil-painting of a kind sold for a few annas at the shrine to the pilgrims as mementoes of their pilgrimage. It represented the misshapen, unlovely figures of the triad there worshipped—Jaganada, his brother Balaram, and his sister Subadra. Their images are said to have been carved each one out of a timber thrown up by the sea. Within this great temple alone of Hindu temples in India all caste distinctions temporarily disappeared. This is supposed to be due to the reputed fact that the shrine was originally Buddhist, but became Hindu on the Brahminical revival about the beginning of the present era. He was once travelling on the Muhanadi from Puri to Balasore on board a steamer with a number of pilgrims returning homeward from the shrine. He got into conversation, through an interpreter, with an elderly and apparently well-to-do man, who was travelling with his wife and sister, and he inquired if he might know what was the object of the man's pilgrimage—what prayer or vow did he desire to make. The traveller told him that he had come from a distant place in the west of India about a thousand miles away; he had no son of his own, but he had a nephew, the son of his brother, and he had come with his wife and sister to make offerings and prayers in the temple of Jaganath for the success of his nephew in the course of his after-life.

Here, again, the crudity and even repulsiveness of the symbol bore no apparent relation whatever to the faith in a divine power that was believed to underlie it.

With regard to the picture they had seen on the screen relating to the churning of the sea of milk, to make the food of heaven for the gods—a very curious and mysterious representation—he exhibited a brass, copper, and silver plaque of the same subject, designed by a Hindu artisan. The demons are in copper, and the gods in silver; between them stands the Mountain of Mystery, Mandara, with the great snake twisted round it. In one of the earlier pictures on the screen Vishnu was shown reclining on the snake, from yuga to yuga, or age to age. The snake was the symbol of Time, and endless time was symbolized here in the West by the snake with its tail in its mouth. He had long been much interested in this strange scene of this churning of the sea of milk, and remembered hearing Lord Curzon say on one occasion that in the ancient ruins of Hindu temples in the jungles of Siam this same parable was depicted on the ruined walls. He had asked a pundit friend for the interpretation of it, and this was the reply: The sea of milk is the ocean of existence; the great mountain is the world itself; the gods are good impulses; the demons are bad impulses; the twisted snake is the symbol of Time. The

interaction and conflict of good and bad impulses throughout the world results in the course of ages in the creation of what the Hindu sages called "the Nectar of the Gods," that is to say, all the ideas of religion and civilization, culture, art, and everything else on which humanity lives and has been developed.

The LECTURER, in reply, said he wished to thank the meeting for their courteous attention, and to add that thanks were also due to the photographer, Mr. Davenport, for the excellent way in which he had produced the slides.

A very interesting point brought out by Sir Arundel Arundel was that the triad of gods at Puri appeared to consist of two male persons and one female. That was a feature he had not met with elsewhere. Finally he desired to express his great obligations to the Chairman for the able way in which he had filled the Chair, and for his interesting speech. (Hear, hear.)

SIR MANCHERJEE BHOWNAGGÉE, in proposing a vote of thanks to the lecturer and the chairman, said the subject had been treated in a very instructive and popular manner. (Hear, hear.) The origin of the Hindu religion and the various forms in which the followers gave expression to their belief in it had been well explained by the lecturer, and he dared say many in the audience had derived an intelligent appreciation of that profound subject after listening to the address. One feature in it which was worth special notice was that the lecturer had fully granted that the Hindu religion was not idolatrous, but that in its origin and essence it enjoined belief in the Almighty. (Cheers.) European writers on Oriental religions had in numerous instances fastened on followers of Zarathushtrian and Hindu faiths the charge of idolatry, which was both erroneous and offensive. The worship of many gods by different sects of Hindus which the lecturer had mentioned might be traced to that instinct, in the worshippers, of fear of evil spirits and influences which the mild disposition of the Hindus perhaps thought it wise to subdue by propitiation. That instinct was not unknown even among Christians, as is illustrated by the well-known story of a devout old lady who was seen to make profound bows in church whenever the name of the Evil One occurred in the course of the service. When she was asked by someone who had remarked this fact the reason of her doing so, she replied that it was prudent to be on good terms all round, as one did not know with whom one might have to deal in the future. (Laughter and cheers.) Sir Mancherjee coupled with the vote of thanks the name of Sir Andrew Wingate, who had so ably presided, and who, like Sir Arundel Arundel, had made an instructive contribution to the proceedings of the afternoon. (Cheers.)

MR. WHITWORTH, in seconding the vote of thanks, said that in speaking of the images of the temples and idolatry, they ought always to remember that behind this seeming idol-worship there was a proper conception of God. It might be noted that there were numerous temples to Shiva, Vishnu, etc., in India, but one never saw there a real temple to God as conceived by the Hindus. The people of the West were too addicted to

praying for people in other lands as Jews, Turks, infidels, etc., without thinking sometimes of the various defaulters in their own country. Those who had been magistrates and judges in India would know that when they put an Indian on his oath they made no reference to Vishnu or Brahmin, but referred simply to the abstract God, which was too sacred in the Hindu mind for any terrestrial temple ever to be erected to him. (Hear hear.)

This terminated the proceedings.

INDIAN SOLDIERS' FUND.

THE following resolution was passed by the Council of the East India Association at a meeting held on Monday, October 19, 1914.

It was proposed by Sir William Ovens Clark, seconded by Mr. R. A. Leslie Moore, and carried unanimously,

"That the Association subscribe £50 to the 'Indian Soldiers' Fund,' and that subscriptions be invited from individual Members also."

(Signed) J. POLLEN,
Hon. Secretary.

			£	s.	d.
East India Association	...	...	50	0	0
R. A. Leslie Moore, Esq.	...	...	5	0	0
G. E. Ward, Esq.	...	...	5	0	0
Sir William Mackworth Young, K.C.S.I.	...	...	2	2	0
J. Sykes Gamble, Esq.	...	...	2	2	0
A. F. Cox, Esq.	...	...	1	1	0
E. H. Man, Esq.	...	...	1	0	0
Mrs. and Miss Forrest	...	...	0	10	0
			<hr/>		
			66	15	0

EAST INDIA ASSOCIATION

SESSION 1914-1915

THE following papers have been promised, and the Literary Committee hope to be able to arrange for their reading and discussion in due course, in addition to other papers which may be hereafter offered :

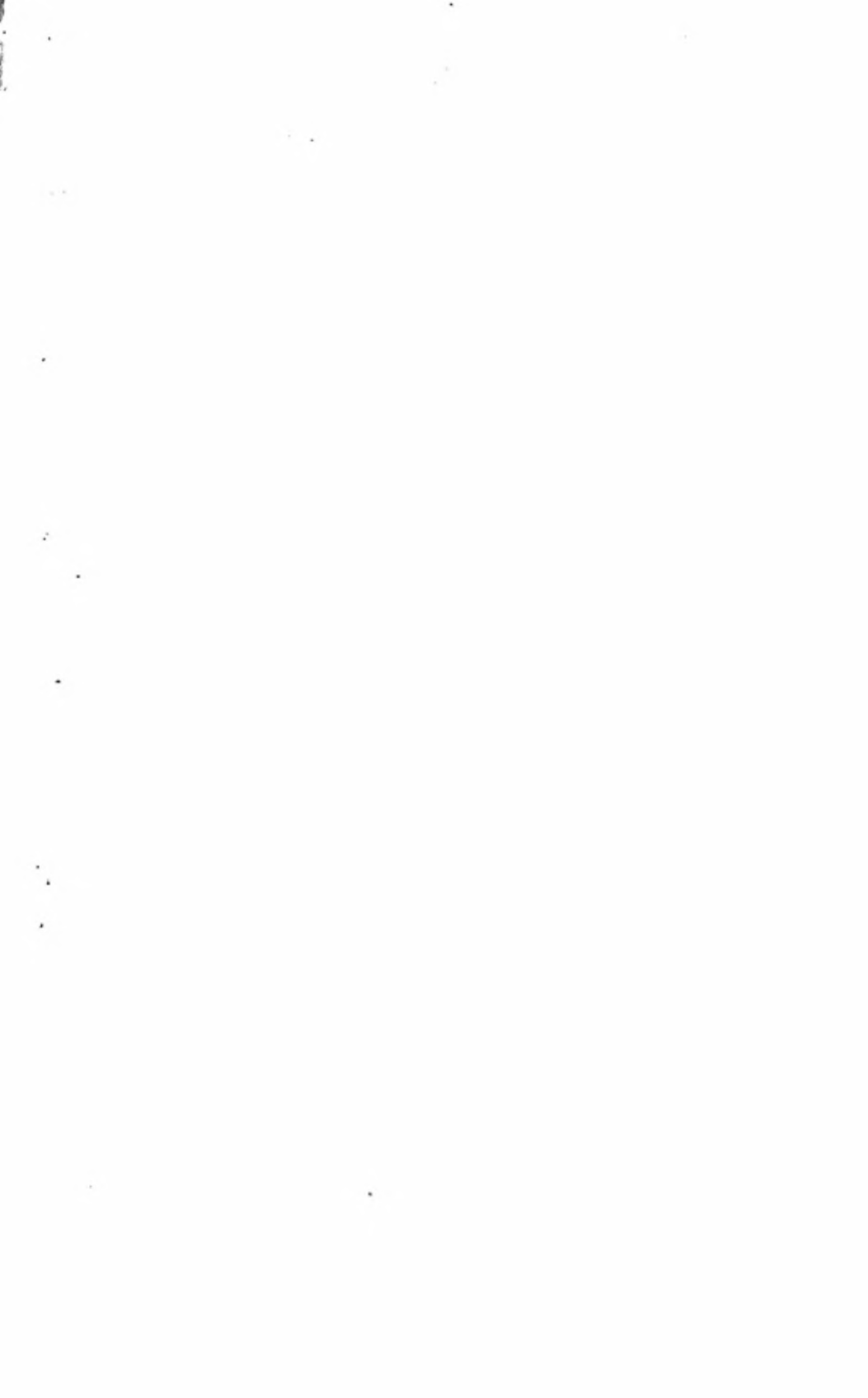
"The Rally of India to the Flag." By A. Yusuf Ali, Esq., I.C.S. (retired), at the Caxton Hall on Monday, November 23, at 4 p.m.

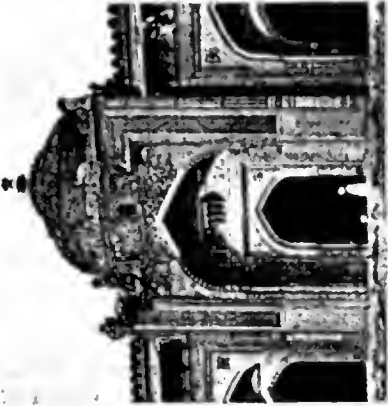
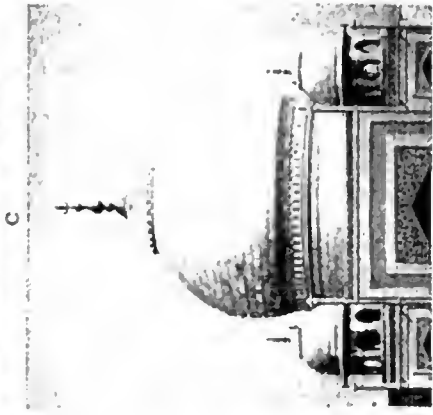
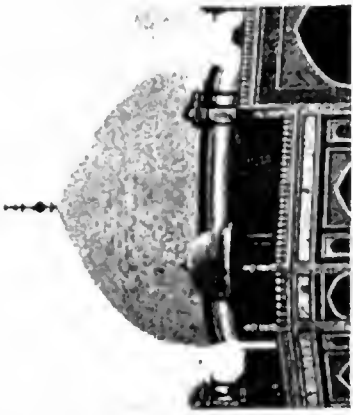
"The Constitution of the Indian Contingent." By Lieutenant-Colonel D. C. Phillott.

"The Princes of India and their Retinues." By Saint Nihal Singh, Esq.

"Indian Railways." By Neville George Priestley, Esq., late Indian Public Works Department.

"Akbar." By Vincent Arthur Smith, Esq., I.C.S. (retired).





INDIAN DOMES OF PERSIAN ORIGIN

By K. A. C. CRESWELL, M.R.A.S.

ALTHOUGH the dome is a structural feature not found in India till after the Muhammadan conquest, the earliest dome in which I see distinctly Persian features is the dome of the mosque in the Purānā Kilā of Shēr Shāh. It has windows round its base—a most unusual feature in Indian domes, which certainly permits us to seek a foreign origin for it.

Let us endeavour to trace back this feature in Muhammadan architecture. The earliest instance known to me of anything of the sort occurs in Persia, in the mausoleum of Imamzadeh Yahia at Veramin,* which was built in A.D. 1186. Although the dome in this case is not itself pierced with windows, in each face of the octagonal drum on which it stands may be seen narrow slit-like openings. The next instance is also to be found at Veramin, where exactly the same feature may be seen in the Masjid-i-Jama, a great building of the Golden Age of Persian architecture; it was built in A.D. 1322 by Sultan Abu Said. Although in neither of these buildings do we find the base of the dome itself pierced, yet they are important, in that they are sign-posts pointing the way, and showing the desire for the bolder feature, which first finds expression in this tentative and halting manner.

I shall now give an instance in which we find, for the

* F. Sarre, "Denkmäler persischer Baukunst," Fig. 65.

first time, the problem solved in its bolder form. The building shown (Plate A*) is at Tūs, near Meshed, in Khurāsān; its date is not known. Here we see the base of the dome itself pierced with windows (some of which have been bricked up), and in order to neutralize the weakening effect of this, it has been built with a massive, stepped, and sixteen-sided lower part. According to O'Donovan,† its internal height cannot be much under 70 feet. He also states that a "gallery seems to have run round the interior of the dome, if one may judge by the remains of wood beams and the spaces sunk in the walls."

I believe the only writer who has attempted to date this building is Professor A. V. W. Jackson, who suggests the middle of the twelfth century as its probable date, thinking it may possibly be the mausoleum of Hamid ibn Kahtabah, mentioned by Yakut in 1216.‡ His choice, however, is apparently limited by his statement (p. 278) regarding Tūs, that "finally the Mongols crushed it never to rise again from the dust in which it lies to-day"—a mistake made by Fraser. As a matter of fact, Ibn Batutah visited it a century later, and describes it as one of the most famous towns in Khurāsān. In 1381 Tīmūr occupied it, and took possession of the province. In 1387 Haji Beg Jani Kurbani, one of Tīmūr's nobles, rebelled at Tūs, strengthened the town, and struck coins in his own name, whereupon Tīmūr sent his youngest son Mirān Shāh against it, who took it after a siege of several months, and massacred 10,000 people. Yet this was not the end of it, as Mirkhond gives an account of a visit Shāh Rukh made to it in A.H. 822 (1419). Khanikoff found a tablet there dated A.H. 983 (1575), and he adds that Tūs does not disappear from the list of places engraved on the tablets of Persian astrolabes until after A.H. 1100 (1685).§ The object in giving the

* By kind permission of Colonel C. E. Yate.

† "The Merv Oasis," vol. ii., p. 15.

‡ "From Constantinople to the Home of Omar Khayyam," p. 288.

§ "Mémoire sur la partie méridionale de l'Asie centrale," p. 31.

geographical position of important places is, of course, to help in the casting of horoscopes, and the position of an uninhabited place would scarcely be found there, so it is evident that the present desertion of Tūs only dates from the commencement of the eighteenth century. It is therefore futile to attempt to date the building from any considerations of this sort, and in the absence of any other evidence, we must fall back on its degree of architectural development to help us. Personally, from the striking feature I have referred to, I would suggest the first half of the fifteenth century for this part, at least, of the building.

I do not think anyone can fail to notice its striking resemblance to the dome of Shēr Shāh's mosque, built in 1541. The stepped part in this latter is not so unnecessarily massive, but none the less it is sixteen-sided, and to add to its stability it is weighted at each of its angles with a small pinnacle 5 feet high (Plate B). This illustration is taken from Russell Sturgis's "History of Architecture,"* as it shows the windows round the base so clearly. Most photographs show the top of the gateway restored, which effectually conceals them.

Though domes with pierced bases are, as I have said, extremely rare in India, there are nevertheless a few other examples, all falling within the same century as the one above—viz., the tomb of Adham Khān, built by Akbar at Delhi, *circa* A.D. 1566;† the Kālī, or Kalān Masjid, built at Agra by the father of Shāh Jahān's first wife, the Kandahāri Begam;‡ and the Masjid of Shāh Vilayet, or Shāh Alā-ud-dīn, commonly known as Alawal Bilawal, close to it. Of these two buildings at Agra, the first has five domes, the second three, the middle dome in each case

* By kind permission of Messrs. Batsford.

† Carr Stephen, "Archæology and Monumental Remains of Delhi," Plate 28. He states that of the sixteen arches round the base of this dome, only the alternate ones were originally open, and some of these have since been bricked up (p. 202).

‡ E. B. Havell, "Agra and the Taj," p. 103.

having windows round its base,* though in the case of the Kalān Masjid some of these openings have been bricked up.

About this time we see a new type of dome appear in India—a double dome with slightly swelling outline standing on a high neck, the earliest example of which is the dome of the mausoleum of Humāyūn. Now, this type, too, has a Persian ancestry; it first appears at Samarkand in the last two buildings erected by Tīmūr—viz., the mausoleum of his wife Bibī Khānūm, and his own mausoleum, known as the Gūr Āmīr. In both these buildings may be seen the earlier type of pointed dome *covered over* by an outer slightly bulbous shell, a large space being left between. As to the origin of this peculiarity, I have treated it in detail in an article, "On the Origin of the Persian Double Dome," in the *Burlington Magazine* (November and December, 1913). It must here suffice to say that from Samarkand it spread to Khurāsān, where it appears in the mosque built at Meshed in 1418 (according to Khanikoff) by Gawhar Shad, the wife of Shāh Rukh; in the mausoleum built by Sultan Husein Mirza (A.D. 1487-1506) in the Musalla at Herat; and midway between these two dates, in the Blue Mosque built at Tabriz between 1437-1468, by Jahān Shāh, the nephew of Gawhar Shad.

Humāyūn succeeded Baber in 1530, but utterly failing to consolidate the great empire left him by his father, he suffered a crushing defeat at the hands of Shēr Khān Sūr at Chausa in 1539, and again at Kanauj in 1540. He was ultimately driven out of Hindustan, and took refuge with Ismail, Shāh of Persia, with whom he found asylum. In the great hall of the palace of Chehel Situn at Isfahan may be seen at the present day six immense oil-paintings, and one of these shows Shāh Tahmasp entertaining Humāyūn at a banquet in 1543 (Fig. 1). The two Kings are on a dais, Humāyūn on the left in gold brocade over a crimson dress, and wearing a small reddish turban with a black

* A. C. L. Carlile, "Agra," in Cunningham, Reports, vol. iv., pp. 170, 176.

plume; Shāh Tahmasp on the right in a red dress over cloth of gold, and wearing a white gold-barred turban, wound round a high kulah, or pointed cap. Around are disposed the singers and orchestra, the bodyguard and royal falconers with the birds perched on the wrists, while in the foreground two dancing-girls are performing. The figures are nearly life-size. The palace of Chehel Situn was burnt down and rebuilt in the reign of Shāh Sultan



FIG. 1.

Husein (A.D. 1694-1722), so this picture *may* date from this period; but Lord Curzon thinks* that from its correspondence with the description of Chardin, there can be very little doubt that it is the identical one described by him in 1670, and may quite well have been the original painted for Shāh Tahmasp. Texier, from whose work† I

* "Persia," vol. ii., p. 35.

† "Description de l'Arménie, la Perse, et la Mésopotamie," vol. i., Plate 73.

have taken my illustration, describes the monarch as Shāh Abbas, a mistake which Lord Curzon corrects.

The following interesting inscription—another memorial of Humāyūn's exile—exists at Turbat-i-Jām, in the shrine of Ahmad-i-Jām, the ancestor of Hamīda Begam, Humāyūn's wife, and the mother of Akbar :

"O Thou whose mercy accepts the apology of all,
The mind of everyone is exposed to Thy majesty,
The threshold of Thy gate is the 'Qiblah gāh' of all peoples,
Thy bounty with a glance supports everyone,
A wanderer in the desert of destitution.

Muhammad Humāyūn,

14th Shawāl, A.H. 951 (December 29, 1544).*

In 1545 Shēr Shāh died, and his son, Salīm Shāh, or Sultan Islam, succeeded him, and reigned between seven and eight years; but on his death the quarrels between his relatives and friends gave Humāyūn, who in the meantime had got back to Kabul with the aid of a Persian army, the opportunity to win back the Mogul Empire at the battle of Sirhind in 1555. Humāyūn did not forget his benefactor, and in the tomb-chamber of Tahmasp's father, Shāh Ismail, in the shrine at Ardebil, is "a large box of sandal wood shaped like a coffin, inlaid with filigree ivory, which had been sent from India to Shah Tahmasp by Humeyoon Shah, as a mark of gratitude for the asylum he had once received in Persia."† Morier,‡ writing in 1816, speaks of "a golden ewer set with precious stones," which had also been presented to the shrine by him. (Humāyūn must have become almost a Persian, and it is not surprising that, surrounded by a Persian army, a Persian Court (the Governor of Delhi was a Persian, Shihābu-d-dīn Ahmad, *Nishāpūri*), and no doubt Persian craftsmen, his mausoleum should have the double dome which was rapidly becoming general in Persia. The following passage in

* Ney Elias, *Journ. Roy. Asiatic Society*, 1897, pp. 47-48.

† Lady Shiel, "Life and Manners in Persia," p. 328.

‡ "A Second Journey through Persia," p. 254.

the Humāyūn-Nāma* is interesting for our purpose: "In Khurāsān his Majesty visited all the gardens, and the flower-gardens, and the splendid buildings put up by Sultān Husain Mirzā, and the grand structures of ancient days." He must, therefore, have seen two of the double domes mentioned above.

Humāyūn died on the 11th of Rab'ī I., A.H. 963 (January 21, 1556), at Dīn Panāh, and was buried where his mausoleum now stands. Hājī Begam, his wife (and the mother of Akbar), laid the foundation of this building (Plate C), which was completed in A.H. 973 (1565) at a cost of fifteen lacs of rupees, the best part of which expenditure must have been borne by the Emperor Akbar himself.† The dome, which is of brick with an outer casing of marble, instead of rising vertically from the drum, is corbelled out so as to overhang it slightly, exactly like the dome of the Bibī Khānūm at Samarkand,‡ and later domes in Persia. Its very slightly swelling outline is also typical of sixteenth-century Persian domes. It is topped with a copper pinnacle, which stands 140 feet from the level of the terrace. The drum on which it stands is 25 feet high, and is decorated with what Carr Stephen (p. 207) calls "the double triangle of the Masonic Order of the Royal Arch, having black stone medallions in the centre," but which from the photograph he gives is obviously the interlacing star pattern so frequently met with all over the Muhammadan East, one of the finest motifs ever devised for surface decoration, and of which the earliest dated example known to me is the mausoleum of Yusuf ibn Kutaijir, built in 1162 at Nakhchevan,§ where it is found already fully developed. The inside of the dome was at one time enriched with gilding and enamel, and from its centre was once suspended a tassel of gold lace.||

* Translated by A. S. Beveridge, p. 169.

† Carr Stephen, *ibid.*, pp. 202-03.

‡ Sarre, *ibid.*, Plate 116.

§ Sarre, *ibid.*, Plate 1.

|| Carr Stephen, *ibid.*, p. 206.

Shortly after the completion of Humāyūn's tomb, was built the mausoleum of Shams-ud-din Muhammad, surnamed Atgah Khān, who received the title of 'Azam Khān from Akbar on the occasion of his victory over Bairām Khān, near Jullunder. He was assassinated by Adham Khān in A.H. 969 (1561) in the state hall of the palace at Agra. His body was removed to Delhi, and buried in the village of Nizām-ud-dīn. In A.H. 974 (1566) a tomb (Plate D) was built over his remains by his second son, Mīrzā Azīz Kukaltāsh Khān; it is dated by the following inscription on marble over the door of the tomb: "This noble edifice was finished in the year A.H. 974 under the superintendence of Ustād Ahmad Qulī."*

Here, again, we find the Persian double dome; the inner one is 30 feet above the floor, whereas the top of the outer one is 54 feet, a space of 24 feet being left between. It is corbelled out from the drum, which is 6 feet high, and built of marble inlaid with red sandstone, the pattern being, as before, the familiar interlacing star motif. Carr Stephen, writing about 1876, says, "The pinnacle of the dome was destroyed by a storm not long ago" (p. 118).

Outside the eastern wall of the mausoleum of Humāyūn stands a tomb which Carr Stephen attributes to Miyān Fahīm, the faithful attendant of Khān Khānān. Before Mahābāt Khān imprisoned Khān Khānān, he tried to buy over Fahīm, who, however, would not betray his master, but fell fighting in his cause. Khān Khānān commemorated the memory of his attendant by building a tomb over his remains in A.H. 1034 (1624). According to Carr Stephen (p. 213), its dome is of the same type as those just described; it is still entirely covered with encaustic plaster of a deep blue colour. The building itself is 62 feet in diameter, and 70 feet high from the floor of the platform to the top of the dome, exclusive of a red stone pinnacle of 6 feet.

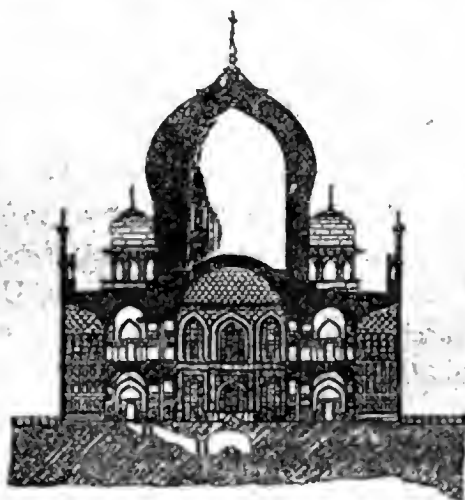
* Carr Stephen, *ibid.*, p. 117.

This Khān Khānān was the son of Humāyūn's general, Bairān Khān, mentioned above. He stood high in Akbar's favour, and held high commands under him, conquering Sind and retaining the Deccan ; but under Jahāngīr he fell into disgrace, and died at Delhi, A.H. 1036 (1626). His tomb is not far from that of Fahīm. During the premiership of the Nawab Wazir of Oudh, Asaf-ud-daulah, it was robbed of nearly all its marble, the facing being stripped from the dome and walls. Before this event it must have been an extremely fine building (Plate E). The dome is double, and is corbelled out at the springing, and, like those just described, it is slightly bulbous, only of rather fuller outline—a tendency which was manifesting itself in Persian domes at this time, as may be seen in the domes built by Shāh 'Abbas and his successors. I shall refer to this building again.

Six years later, in 1632, was commenced the world-famous Tāj Mahall (Plate F). A Persian, Ustād Īsā, was supervising architect, and the dome specialist was named Ismail Khān, *Rūmi*, which probably means that he came from Asia Minor. It took twenty-two years to build, being completed in 1654. The dome is built entirely of marble ; like those last described, it rests on a high neck, and it is slightly corbelled out at the springing. It is double, as shown in the section here given (Fig. 2), and its only novel feature is the inverted lotus finial—a feature which from this moment came into general use, and which is found in all the domes I shall describe below. I will now revert to the mausoleum of Khān Khānān. This mausoleum, which has been ignored in this connection by every writer on the subject, appears to me to have been the real model on which the Tāj was based. It resembles the Tāj much more closely than does the mausoleum of Humāyūn, its whole framework being more drawn together, while its dome is practically identical in shape. The kiosks at the corners, too, as also the doorways, which are flush with the façade instead of being recessed, bear this out. Before

this mausoleum was stripped of its marble, the resemblance must have been startling.

It were folly to suggest that a style can invade a country, and remain a thing apart from locality and race ; not only are the pinnacles of the domes of many early Indian mosques and tombs borrowed from Hindu architecture, but the same influence is responsible for the inverted lotus which caps the dome of the Tāj ; yet lest I should be thought guilty of such bias, I will hasten to add that I recognize another feature also as a local development.



Section of Tāj Mahall, Agra. Scale 110 ft. to 1 in.

FIG. 2.

This feature is the arrangement of plan, which in Humā-yūn's mausoleum, in that of Khān Khānān, and in the Tāj (Fig. 3), consists of four smaller chambers grouped around a larger central one. Whether this arrangement, as suggested by Mr. Havell,* has any connection, even distant, with what he calls "the Panch Ratna" arrangement, as exemplified in one of the small shrines of Chadni Sewa at Prambanam, I am not prepared to offer an opinion ; but I think I am safe in saying that it is not found elsewhere in

* "Indian Architecture," pp: 22-23.

Islam. Nor do I think, simple though it is, that it is an arrangement likely to arise spontaneously in the mind of an architect anxious to develop the simple single-chamber

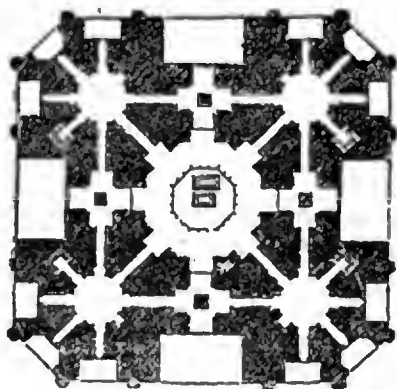


FIG. 3.

plan. Throughout the East it would appear that the natural development from the single octagonal-domed chamber was the addition of an ambulatory, also octagonal in outline.

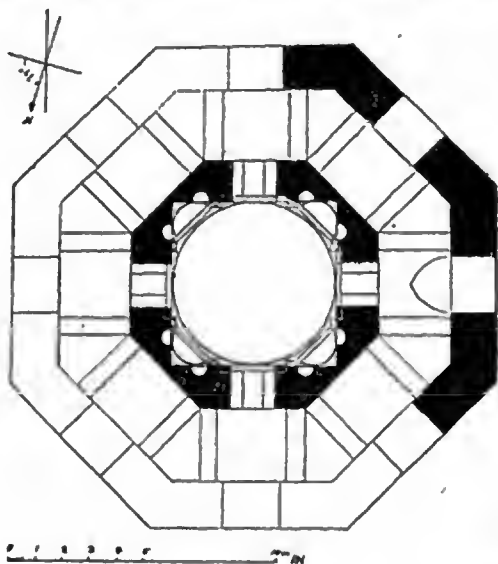


FIG. 4.

This type, which occurs as early as the sixth century in the church of St. George at Ezra,* is found also in

* M. de Vogüé, "Syrie Centrale," Plate XXI.

the Dome of the Rock (Kubbet es Sakhra) at Jerusalem* (690-707), in the Kubbet es Slebyeh at Sāmarrā (Fig. 4), which Professor E. Herzfeld believes to be the mausoleum of Muntaṣir, Mu'tass, and Muhtadī† (ninth century); and nearer to our subject in a tomb at Khairpur,‡ in the tomb of Ala-ud-Dīn Ālam at Tejara (Fig. 5), and the in mausoleums of Shēr Shāh and Islām Shāh at Sahsarām. I therefore say with considerable confidence that the five-chambered plan was certainly a feature evolved in India, and, further, that it remained confined to India.

As for the *raison d'être* of the octagonal dome-chamber

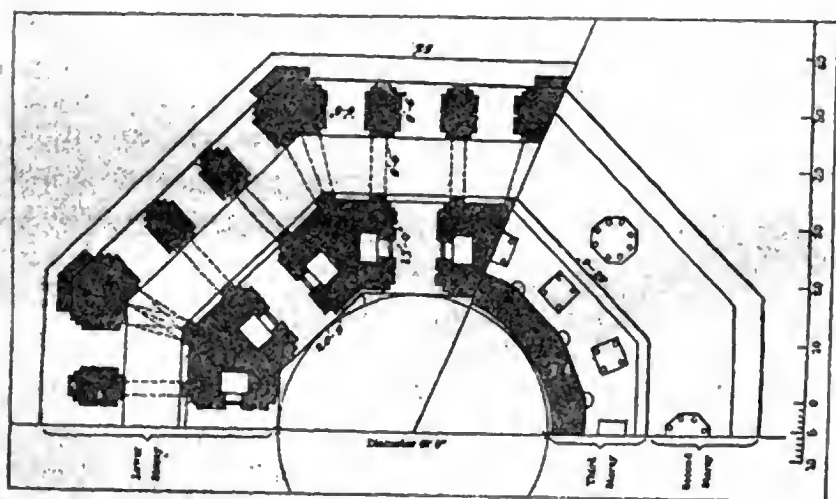


FIG. 5.

itself, I consider it to be chiefly the fact that by it the problem of the pendentive—the great problem in the evolution of domical construction—was avoided, the octagon being such a close approximation to a circle that the setting of a dome upon it offers no difficulty. In Persia, where a satisfactory pendentive was known at least as early as A.D. 240,§ octagonal dome-chambers are unusual, one of

* M. de Vogüé, "Le Temple de Jerusalem," Plate XVIII.

† "Erster vorläufiger bericht über die ausgrabungen von Samarra."

‡ Fergusson, "Indian Architecture," vol. ii, Fig. 379.

§ Journ. Roy. Asiatic Society, 1914, pp. 682-683.

the few instances being the mausoleum of Khudabunda at Sultānīeh, where the size of the dome—84 feet—may well have made the architect doubtful of his powers, and anxious to avoid the use of a pendentive. In India, where a satisfactory pendentive was of late introduction, and where horizontal brackets, advancing one over the other, usually did duty instead for some centuries after the Muhammadan conquest, octagonal dome-chambers are naturally a constant feature.

The tendency to fulness of outline noticeable in the Tāj may also be observed in the Jama Masjid at Delhi, built 1648-1650. The three domes of this mosque are of white marble divided into vertical sections (or "lunes," to use the mathematical term) by inlays of black marble, and they stand on necks of red sandstone. This tendency to fulness of outline becomes still more pronounced by the commencement of the eighteenth century. In A.D. 1710 Zinath-ul-nisa Begam, the daughter of Aurangzib, built the Zinath-ul-Masājid, which, next to the Jama Masjid, is the most important building of its kind in modern Delhi. Like the latter, it has three domes; and like it also, these domes are of white marble, striped with vertical inlays of black marble. The central dome is the largest, and stands on a white marble neck 8 feet high, the two side ones on necks 6 feet high, but their bulbous shape is very pronounced. Their inverted lotus finials are topped with copper-gilt pinnacles. As to the date of this building, the tomb bears the date A.H. 1128 (1710), but Zinath-ul-nisa Begam did not die till about 1720. It could hardly have been built in 1700, as stated by Carr Stephen (p. 261) and Fanshawe (p. 68), as the Begam was in the Deccan in her father's camp until his death, and only returned to Delhi in the second half of 1707.*

In 1721 the Sonahri Masjid was built by Roshan-ud-daulah in the Chadni Chauk. This is the mosque in which Nadir Shāh sat during the massacre of the people of Delhi

* See William Irvine in the *Journ. Roy. Asiatic Society*, 1903, p. 388.

in 1737. It has three domes of gilt copper. This feature in Persia is confined to the domes of sacred shrines, such as Meshed and Kum, but in India it occurs in several instances in the domes of late mosques. I have reason to believe that it was first employed in Persia towards the second half of the seventeenth century, or about fifty years earlier than the date of this mosque, which is the earliest instance of it in India. The domes are divided into sections by bold ribs, a feature found also in the domes of the Moti Masjid of Lal Qilah built by Aurangzib, A.H. 1070, (1659).

There is a second Sonahri Masjid in the Faiz Bazaar built by Roshan-ud-daulah, A.H. 1158, according to Carr Stephen, but the chronogram as given by the Asar-us-sanādīd of Sayid Ahmed yields 1148 and not 1158. It reads: *Masjide chūn bait-i-aqasi muhīt-i-nūrullah—i.e., A.H. 1148 (1736).** The domes of this mosque were originally covered with copper-gilt casings, but they were used for the repair of the domes of the mosque in the Chadni Chauk, mentioned above.

There is yet another mosque in Delhi which had a gilt dome—the Sonahri Masjid, near Lal Qilah, built by Jāvad Khān in 1751. Its bulbous domes stood on cylinders 3 feet in height, but when repaired by Bahādur Shāh in 1852, the gilt casing was removed, and the domes were covered with sandstone, striped vertically with redstone, and crowned with gilt pinnacles.†

The last dome I shall refer to is that of the mausoleum of Safdar Jung, Nawab Wāstr of Oudh. He was a Persian by birth, and came to India at the request of his uncle, who was Viceroy of Oudh, and he rose to power when order had been restored after the departure of Nadir Shāh. He died in 1753, and was buried in his mausoleum near the Kutb Minār. In arrangement of plan it is similar to that of Humāyūn and the Tāj Mahall. The central dome

* See William Irvine in the *Journ. Roy. Asiatic Society*, 1903, p. 388.

† Carr Stephen, *ibid.*, p. 277.

is triple, the two inner ones of brick and flattish, the outer one bulbous and of marble.*

In Persia, the date of late double domes can be roughly estimated by their degree of swelling. I think it is evident that this is the case in India also, except that the bulbous shape never takes such an extreme form there as it does in Shirāz.

The question arises: What led to the popularity of the double dome? Speaking of the wooden dome of the Great Mosque at Damascus (which I consider to have been the prototype of the Persian double dome), Ibn Jubair (1184) remarks, and his statement is repeated by Ibn Batutah (1326): "From whatever quarter you approach the city you see this dome, high above all else, as though suspended in the air."† It was probably for the sake of its external effect that this form was devised, and came to be adopted elsewhere.

* J. D. Beglar, "Delhi," in Cunningham, Reports, vol. iv., p. 67.

† G. Le Strange, "Palestine under the Moslems," p. 244.

THE INDIAN MYTH OF "CHURNING THE OCEAN" INTERPRETED: A NEW CHAPTER IN ARYAN PRE-HISTORY

By L. A. WADDELL, C.B., C.I.E., LL.D.

THE ancient Indian myth of the "Churning of the Ocean" by the Gods in order to obtain the Elixir of Life and Immortality, forms a striking episode in both of the great Indian epics and in later Brahmanist literature as well, but is generally regarded as the mere fanciful and arbitrary product of the grotesque imagination of Brahmanical bards, and wanting in any obvious meaning. No one appears even to have seriously regarded it as of possible cosmic significance, except Kuhn and Senart; the former seeing in the products of the churning merely different manifestations of cosmic fire or lightning, and the latter "the synonymy of the gem and the trident."

Now, however, on re-examining this classic myth, I have discovered that it is of *far-reaching ethnic and historical importance, and that it discloses an important new chapter in proto-Aryan history*. It is obviously *a vestige of the prehistoric Aryan period, preserving an archaic philosophic view of the Creation of the Universe from Chaos*, and it clearly dates back to the proto-Aryan period—that is to say, before the dispersion not only of the Indian from the Aryan, but before the emergence of the European branch of the Aryan race. For the products of the churning are found in the identical

order and form, also in the mythology of Greece and Rome. Its elements, indeed, are now seen to form *the foundation of all the chief forms of Aryan religious myth, European, Persian, and Indian.*

But the greatest significance of this discovery is that *it brings the proto-Aryan civilization into direct contact with the source of the earliest culture of the world,** as the elements in question are clearly traceable to Babylonian cosmogony, after it had been given an astrological basis. Its fresh light also enables us to co-ordinate and explain many important points hitherto irreconcilable in the mythology of the three great branches of our Aryan race—the Armeno-Iranian, Indian, and the early Greco-European.

The metaphor of "churning" appears to me to be manifestly the outcome of an attempt by a primitive people in the pastoral stage of society to explain the evolution of the solid bodies of organic Nature from the amorphous fluid of the Primeval Waters, by the homely mechanical means best known to the people for extracting solids from a liquid.

PRE-VEDIC ORIGIN OF THE CHURNING MYTH

The churning episode is frankly an event of the pre-Vedic and pre-Brahmanical period, because it is performed through the agency of the *Asuras* (the *Uranidai* of the Greeks)—that is to say, the proto-Aryan gods, of whom *Ahura Mazda* (*Varuṇa*, the Greek *Uranos*) was chief. It therefore dates to a period before the separation of the Indian from the Iranian stock—*i.e.*, anterior to $\pm 1400-1200$ B.C.

The *essential* agents in the churning are, I find, only two—namely, the primeval Serpent of the Deep, "The Infinite or Eternal One" (*Ananta* or *Vāsuki*)† on the one hand,

* That is, if we accept the view now gaining ground that the Egyptian culture was derived from the Babylonian.

† *Vāsu*="jewel"+*ka*, "head," is the usual etymology of this serpent-deity of treasure (Wilson, *Sansk. Dict.*, 184, 781); but I would suggest as a possible equation *Vas*, to abide+*ka*, water.

and the Asuras who held the head of the serpent in using the latter as the churning-rod, on the other. In all the various versions of the episode, in the epics and *Purāṇas*, none of the Brahmanical gods take any effective part whatever in the process of extracting the "Treasures" of the Deep—that is, the objects which were "created" by the churning.

The Brahmanical gods are altogether superfluous to the theme, and are confessedly powerless to extract a single treasure.* Even the supreme Brahmanist gods *Nārāyaṇa* and *Brahmā* take no part in the actual operation. *Brahmā* (who was not certainly evolved as a god in the latest Vedic period—i.e., about 500 B.C.) merely acts as a messenger to *Nārāyaṇa*, who in turn asks the serpent *Ananta* or *Vāsuki* to do the work. Though to save the dignity of the new Brahmanist gods, whose existence at that period is a transparent anachronism, the Brahman bards made "the Asuras hold *Vāsuki* (i.e., *Ananta*) by the head and the gods by the tail, and *Ananta*, who was for *Nārāyaṇa*, at intervals raised his snake's head and suddenly lowered it."† The concluding part of this sentence reads as if the serpent *Ananta* performed the churning independently, without the aid even of the Asuras.

AGREEMENT WITH THE BABYLONIAN CREATION-MYTH

The conditions above noted are virtually in absolute agreement with the earliest Babylonian cosmogony of about 3000 B.C., as recorded in the famous tablets. According to this, in the beginning, before the earth appeared, there existed from eternity only the primeval waters, the spirit of which in the form of "the old serpent" or dragon of Chaos was the great solitary Monad, or First Great Cause. Though latterly the Absolute was represented as a dualism,

* After ineffectual efforts, "the gods appeared before the boon-granting *Brahmā* seated on his seat, and said: 'Sir, we are spent; we have not strength left to churn further. Ambrosia has not yet arisen'" (*Mahābhārata* i. 1143; cf. also Roy's translation, i. 80).

† *Mahābhārata*, i. 1124¹25; cf. Roy's translation, i. 80.

in which the old serpent of the waters is coeval or co-existent with the Lord-of-Heaven-to-be, *Anu* (or *Anos*, whom I identify with *Our-anos*, the *Uru-w-ana* [i.e., *Varuna*] of Ur of Chaldea and of the Aryan Hittite inscription of 1400 B.C. of Boghaz-kui); and these two are the prototypes of the Iranian *Ahura-Mazda* and *Ahriman*.

The old serpent of the deep or universal mother was called by the Babylonians "*Mummu Tiamath*" (i.e. = Greek *Thalassa*, or "the Sea") and brought forth everything. At first she begat the god of the sky, *Anu*, directly or in two or three generations. After *Anu* came *Bel*, "the lord," and *Ea* (or *Aa*, the "god," as opposed to the "Serpent," of the Deep and the lord of Deep Wisdom); and his son was *Merodach*, who became the champion of the gods, and latterly the divine creator.

Then in the dissensions which arose between the gods and the serpent brood of dragon spirits, *Merodach* kills the old serpent and stretches half her body on high to form the sky, with mansions for *Anu* and the other great gods, and thereon *Merodach* assumed the functions of creator for the rest of the universe. He set the moon on high and arranged its mutations, and he created man "with his own blood." This pantheistic conception of the origin of man is analogous to that taught by Brahmans in their theory that man was fashioned from a part of the body of the creator (*prajāpati*) *Nārāyana-Viṣṇu*.

It is the creation of the universe from the primeval waters by The Old Serpent and by *Anu* through his grandson *Merodach*, which clearly forms the story of the Churning of the Ocean of the Hindu myth, and it is, of course, a version of the same which we find in the first chapter of *Genesis*, derived by the Jews from pre-Semitic Chaldea.*

* T. Pinches, *Religion Babylonia*, 1906, 30 f., from which the above account is mostly summarized.

STAGE OF CREATION AT THE CHURNING

The stage of creation represented at the beginning of the churning is the second stage in the Mosaic or later Chaldean tradition—namely, where "the Spirit of God moved upon the face of the waters" (Gen. i. 2); and this position for the Creator is precisely and literally expressed in the new post-Vedic title which the Indian Brahmans gave to the Creator, after divesting the *Asura Varuna* of that office—namely, *Nār-āyana*, or "He who moves upon the waters." That the serpent himself (or herself) was possibly considered by the Indo-Aryans in the pre-Vedic period to be the monistic creator is suggested by that version of the churning which makes the god *Nārāyana* himself issue from the ocean with the other "treasures" as a result of the churning.* Though this, however, may be merely a result of the later identification of the solar god *Viṣṇu*, with *Nārāyaṇa* to explain the circumstance that the Sun also issued as one of the "treasures," the one which I identify as No. 4 in the table, symbolized by the horse of the chariot of that luminary.

THE ACT OF CHURNING AND THE "OCEAN-TREASURES"
PRODUCED

The earliest version of the churning episode in the Indian classics is presumably that found in the *Mahābhārata* (about fourth century B.C), as it occurs there in a simpler and more coherent form than in the *Rāmāyana* version, in which the Viṣṇuite additions, of which it is one, date to "the second century B.C. and later."† The sectarian *Purāṇa* versions are, of course, much later and more expanded, the *Viṣṇu-P.* being later than "about A.D. 320.‡ For the following literal translation of the stanzas from the *Mahābhārata*, § detailing the emergence of these treasures

* Lassen, *Indische Alterthum*, iv. 580.

† Cf. Macdonell, *Imp. Gaz. Ind.*, ii. 237.

‡ *Ibid.*

§ i. 1145-1149, Calcutta edition. The translation by Roy (i. 80, 81) is not sufficiently accurate to be accepted on critical points.

from the ocean in the process of churning, I am indebted to the kindness of Dr. Hoernle :

"Then, from the churned ocean, the Thousand-rayed One, the Placid-souled One,

Came forth, *Soma* [the Moon], the White-rayed One, the luminous, Thereafter *Śrī* [the goddess of Good Fortune] arose from the cream [-ocean], white robed,

Also *Surā*, the goddess, arose [and] the white steed.

And *Kaustubha*, the celestial gem, arose, born of the cream, luminous as *Marīci* [the Sun], fixed on the breast of the excellent *Nārāyaṇa*.

Śrī, *Surā* as well, and *Soma*, and the steed fleet as thought, Where the *devas* were, there they went, taking the *Āditya* path.

The *Dhanvantari*, the *deva* in bodily form came forth ; bearing the white vessel, in which ambrosia abideth.

. . . At length arose the great elephant *Āirāvata* huge of body, with four white tusks, him took the Holder of the Thunderbolt [*Indra*]."

These mythological products, so seemingly fantastic, I shall now prove *represent the Evolution of the Universe according to what must have been the common tradition of all the great branches of the primitive Aryan race*, for it is found in all the great divisions of that race and formed the basis of all their religions.

THE "OCEAN-TREASURES" ARE IDENTICAL WITH THE "SEVEN TREASURES" OF THE SUPREME GOD OF THE UNIVERSE, THE *CHAKRA-VARTIN*.

Now, it is a notable fact, not previously noticed, that the number of these Ocean-treasures, called in the above *Mahābhārata* version the "All-Treasures" (*Sarva-ratnani*, i., 1111), is exactly seven,* that is, the precise number of the treasures of the *Chakra-vartin* of ancient Indian legend. This numerical agreement supplied me with the first hint to the interpretation of both these series of treasures.

* The only other object evolved at the great churning was the deadly poison *Kālakuṭa*, "blazing like a flame," and threatening to destroy creation, to prevent which calamity it was swallowed by "the great god" (*Mahādeva*), and sticking in his throat, conferred on him the epithet of *Nilakaṇṭha*. This cannot be considered one of the "Treasures."

The epithet of "*Chakra-vartin*," common to Brahmanical, Buddhist, and Jaina literature, is usually rendered "Lord of the Wheel, or *Chakra*." Although it is not found itself in the Vedas, "the seven treasures" which are the exclusive attributes of that personage are mentioned in the *Rig Veda* (about 1200-800 B.C.) in association with only two gods, who are henotheistically representing the supreme deity—namely, the dual *Soma-Rudra*, i.e., the Moon-Thunderstorm god, and *Agni*, or deified Fire, celestial and terrestrial—a god who in the *Rig Veda* is expressly associated with, and positively identified with, both *Soma* and *Rudra*. When the name "*Chakra-vartin*" does appear in post-Vedic literature it is as the title of a few fabulous kings, and although these kings seem nowise historical, still, strange to say, modern writers, with one exception—M. Senart—invariably regard the *Chakra-vartin* as an earthly personage.

On the contrary, I have elsewhere* adduced decisive evidence supporting M. Senart's conclusion—a conclusion arrived at quite independently and on other lines by myself—that the *Chakra-vartin* is *never a human personage at all, but the supreme deity*, and that his seven treasures are purely cosmic in character. This view is now fully confirmed by my study of the Ocean-Treasures. These products, especially associated with both *Soma* or the Moon and Ambrosia are, I find, absolutely identical with the *Chakra-vartin*'s treasures, which we have seen were also associated with the god *Soma*. These Ocean-Treasures are, in fact, the prototypes of the *Chakra-vartin*'s "treasures," the origin and nature of which was hitherto unknown.†

Revealed in this way as identical expressions for the same symbolism of Creation, the two series, the "Ocean-Treasures" and "The Seven Treasures" have upon close comparison enabled me to correlate them with the Western

* *Ostasiatische Zeitschrift*, Berlin, July, 1914.

† M. Senart suggested that the *Chakra-vartin*'s treasures were a parallel series, but not identical with the ocean series, whilst identifying them merely with "the gem and the trident."

Aryan religious myths and cosmogonies outside India, in Persia and ancient Europe.

THE "OCEAN-TREASURES" SYMBOLIZE THE EVOLUTION OF
THE UNIVERSE FROM CHAOS, AND THE ORIGIN OF
THE GREAT NATURE-GODS

The evolution of the universe from Chaos, which I find is symbolized in the myth of the Ocean-churning with its evolved products, I represent graphically in the diagram on the succeeding page. This clearly discloses the evolution of the great gods upon a naturalistic basis, and at the same time exhibits a genealogical tree of the gods which significantly explains many disputed and doubtful points in the evolution and inter-relations of their homologues, the great gods of ancient Greece. The obvious planetary analogue, manifestly a later adaptation, as the Sun does not head the list, and Venus and Mercury are transposed, I have placed within square brackets.

THE MOON AS PARENT OF THE SUN

A most striking fact emerging from the diagram is that the first divine object to issue at the creation was the *Moon*, and not the Sun. This fact alone postulates for this scheme of creation an extremely remote antiquity, as the Sun was already predominant in the religion of Babylonia and Egypt before 3000 B.C., although affording distinct traces of having displaced the Moon as paramount god.

The primitive notion that the Moon was the parent of the Sun and of the other elemental gods rested on the observation that the former luminary was more intimately associated than the sun with the darkness, and thus presumably emerged from the pristine primeval darkness before the sun, and hence, according to *post hoc propter hoc* argument, it was the parent of the latter. The early belief in the paramount importance of the moon was also fostered by its ever-changing form, and periodical disappearance and

PRIMORDIAL CREATOR.

Ananta, or "Eternity" (or *Vāsuki*), the primeval Serpent of the Deep.

Alone or assisted or directed by the Great *Asura* (*Ahura Masda*, or *Varuṇa*),
as *Nār-āyana* = "Who moves upon the Waters."
(*Ahi-budhāya*, *Aditi*, *Tiamath*, or *Thalassa*.)

- | | |
|---|---|
| <p>1. MOON.
<i>Soma</i>, first ruler of Sky.
(Sky deified = <i>Varuṇa</i>, <i>Uruwana</i>, the <i>Asura</i>
or <i>Ouranos</i>, <i>Dyaus I.</i>, <i>Odin I.</i>, <i>Aśtur</i>,
<i>Osiris</i>; <i>Hera-Ur</i>?, <i>Anu</i>, <i>Sin</i> of <i>Ur</i>.)</p> | <p>2. EARTH-MOTHER [Venus].
<i>Śrī</i>, the goddess of Good Fortune.
(<i>Prithvī</i>, <i>Gaia</i>, <i>Frika</i>.)</p> |
|---|---|

3. DAWN [Mars].
Surā, the goddess armed with light-beams, pioneer, and
leader (mother and wife) of Sun-horse.
(= *Ufas*, *Eos*, *Aphrodite Ourania*, *Athene Ankhita*, *Ardivi-Sūra*, *Diana*, *Iris*, *Istar*.)

4. SUN.
Turagah, "the swift courser" (*Aśva*).
"The friend," *Mitra* = ? *Atvin* pair or *Nāsatya*.
(*Helios*, ? *Dioskouroi*, *Odin's* white horse *Sleipnir*,
Horus-Ra, the swift hawk, *Samaf*.)

5. LIGHTNING [Jupiter].
Maṇi, the (flashing) Gem, *Kaustubha*.
The jewel on the breast of *Viṣṇu-Nārāyaṇa*, the *Brisinga-*
'Men' (*Maṇi*?) jewel by which Thor recovered his hammer.
The bolt of *Indra*, the *Vajra*.
(*Dyaus II.*, later ruler of the gods, or *Zeus*, *Jupiter*, *Odin II.*, *Merodach*.)

6. DIVINE (FIRE-) PRIEST [Mercury].
Dhanvantari, the god, and messenger
of the gods, physician, and bene-
factor to men.
(*Hermes*.)

7. SPIRIT OF RAIN-CLOUD AND
VEGETATION [Saturn].
The great *Nāgā* (elephant or
snake) *Airāvata*.
The spirit of watery and earthly
treasure, on whom rides *Indra*.
(*Dionysos*, god of corn and wine;
and *Saturnalia*, with the roaring
lion as his companion.)

reappearance, seeming to indicate to the early philosophers that that luminary took a much more active part in the working of Nature than the unchanging sun.

Although this is a conception of much earlier age than the Vedas (\pm 1200-600 B.C.), there seems no direct reference in the Rig Veda to the Moon as the parent of the Sun (he is the husband of the sun in Rig Veda 10, 85). Yet, as the word "*Soma*" carries the double sense of the "Moon" and "Ambrosia," upon which latter not only the Sun but also other gods feed, and as the *Soma*-rite is admittedly the basis of Vedic ritual and religion, it is very probable that the *Soma*-rite and its terminology is mystically founded upon the archaic belief in the Moon as the parent and nourisher of the gods. In a contemporary Vedic commentary (*Chāndogya Upaniṣad*, 5, 10, 1, etc.), and in post-Vedic literature generally, *Soma* as the moon is positively regarded as being drunk up by the gods, and so is explained its waning until it is re-filled up by the sun.*

This notion, therefore, that the Moon was the universal celestial nourisher seems based upon the idea that *Soma* as the Moon, if not the universal parent and creator himself, and the centre of Vedic belief and cult, as Hillebrand considers,† was at least one of the chief attributes of that parent and the foremost "Treasure" of the gods, as we find it in the products of the churning.

THE MOON IN RELATION TO VARUṆA OR OURANOS AS CREATOR

The hypothesis that *Varuna* as the early Vedic Sky-god and creator represented primarily the Moon has been put forward by Oldenberg,‡ who argued from the assumed planetary character of the Vedic gods of light, the *Adityas*, and the assumed identity of these with the Avestan *Ameṣas-pentas*, the "angels" of *Ahura Mazda*, that is, *Varuna*.

* Macdonell, *Vedic Myth.*, 112 f.

† *Vedische Mythologie*, 227 f.

‡ *Religion des Veda*, 1894, 285 f.

This identity, however, is not accepted by Macdonell (*Ved. Myth.*, 28) and others, on the ground that it does not account well for the actual characteristics of *Varuna* in the Rig Veda, and also requires the absolute rejection of any connection between *Varuna* and *Ouranos*. But the fresh independent testimony I now bring forward from this churning myth explains and reconciles both these objections, as will especially be seen later in comparing the *Adityas* and *Amesa-spentas* with the Ocean-treasures, with which I find them identical.

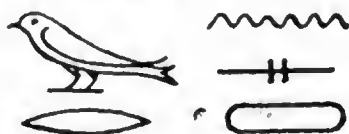
The main source of confusion, as it appears to me, has been the omission to recognize that there were two stages in the evolution of the Sky-god. In the first stage, in the Babylonian myth, as we have seen, *Anu* and *Merodach* were long in existence before they achieved the sky (see foregoing diagram). This was not attained until after the conclusion of the cosmic battle with the serpents-dragons of the waters (that is, not till after the strife which churned the ocean in the Hindu myth). With the conclusion of this great strife came the new order of things. The sky was then formed out of the substance of the great she-dragon, and the gods and luminaries obtained their positions there; and Anu (*i.e.*, the Moon or *Ouranos* and *Dyaus I.*, see diagram), as Sky-god, assumed his function of general creator, in succession apparently to the primordial she-dragon. This presumably seems to have been generally the same course followed by the Moon in the Indian churning episode. In the waters before it ascended to the sky the Moon bears in the Veda the title of "Son of the Waters" (*Apām-nāpat*). Eventually it became the first god of the Sky until displaced in later ages by the Sun and Lightning—*i.e.*, *Zeus* (see diagram).

The Moon was thus manifestly considered to be the earliest ruler of the Sky and the first establisher of the new order of things; and it was perhaps the first stage in the conception of the Sky-god, *Ouranos* or *Varuna*, the "*Uru-*

wana of the Hittite inscription of 1400 B.C. For it moved across not only the whole stretch of the sky, but into the darkness beyond. He was the paramount god under the name *Sin* (? Chand) at Ur in Chaldea about 3000 B.C., and I believe that the title *Uru-w-ana* may connote this fact.

Certainly, in the early Rig Veda, \pm 1200 B.C., *Varuna* is god of the entire sky, and creator of the sun, moon, and the universe. He is "lord of light by day and night." But in the later Vedic period he is more especially identified with the Moon as *Soma* (Rig Veda, 9, 77, 5; 9, 95, 4; 73, 3, 9; 8, 41, 8),* and specially connected with the nocturnal heavens. Thus *Mitra* is said to have produced the day and *Varuna* the night,† and the night is said to belong to *Varuna*.‡

In this way *Varuna*, *Uruwana*, or *Ouranos*, became the god of the *Darkness-beyond-this-Life*; and he ruled over the paradise of the blessed, *Sukhāvatī* in the Western Ocean, where the Moon (or Sun) sinks out of sight (see my article on the "Origin of the Buddhist Cult" in this REVIEW for 1912, pp. 143, 158). In this capacity as ruler of the next world the name of *Varuna* or *Uranos* actually occurs in the ancient Egyptian inscriptions as the epithet of the second country of the "*Duat*" or Other World of the Dead, through which the sun passes at night. The Egyptian word is WRNS (spelt without vowels), the oblong determinative at the end of the word signifies an island.



The earliest Egyptian occurrence of the word appears to be in the tomb of Sety I., of the nineteenth dynasty, about 1300 B.C.§

Thus the disc "wheel" of the Moon (as the ancients

* Macdonell, *Vedic Myth.*, 110.

† *Taittiriya Samhitā*, 6, 4, 8, 3.

‡ *Ibid.*, 2, 1, 7, 4; Macdonell, *Vedic Myth.*, 25.

§ For this important reference I am indebted to the kindness of Miss M. Murray. The discovery was published by Lefébvre in *Annales du Musée Guimet* (Facsimiles of the Inscriptions), and by Jéquier, *Livre de ce qu'il y a dans l'Hades*, 51, 49.

seem to have regarded the earth and the great luminaries as discs or wheels, not orbs) appears to have become in archaic times the chief emblem of the Supreme God of this world and the world beyond, and the first of the "Treasures" of the *Chakra-vartin*, giving to that personage his title. But this "wheel" or disc (*chakra*), from which the *Chakra-vartin* derives his name, I have thus proved conclusively is the *Moon*, and not the *Sun*, as has hitherto been universally believed by European writers. The owner of "The Seven Treasures" thus is clearly the supreme god *Varuna* or *Ouranos* himself; and I have already discovered, as reported in this REVIEW (1912, pp. 139, 143, 158), that *Varuna* actually bears in the Bharhut Sculptures of about 250 B.C. the title of "*Chakra-vāka*," or "Wheel of the Law,"* which is, I consider, a prototype of the "*Chakra-vartin*," an aspect of the Supreme God of the Universe, in the quasi-monotheistic phase of early Brahmanism.

The supreme creative functions ascribed in the Rig Veda to *Soma* as both Moon and Ambrosia collectively are largely identical with those ascribed therein to *Varuna*, including the ethical one of dispelling sin.†

NĀRĀYAṆA AND VARUṆA, OR OURANOS

How *Nārāyana* was evolved by post-Vedic Brahmins from *Varuna*, the great *Asura*, I have shown in detail elsewhere.‡

In our version of the churning episode which belongs to the Viṣṇu sect of later Brahmanism, *Nārāyana*, as their supreme god, is given the place of *Varuna* as technical creator. He is made in one version to have been in existence before the churning, and therefore co-existent with the old Serpent *Ananta*, on which he is usually pictured as reclining in the midst of the primeval waters. Though in another version, as we have seen, he emerges with the

* *Vāka* in the Rig Veda is "speech or word," and specially connotes *Rita* or "Fixed Law"—i.e., *Dharma* (cf. Grassman, R.V. Worterbuch 1248).

† Macdonell, *Vedic Myth*, 109.

‡ My article on "Buddha's Diadem" in *Ostasiatische Zeitschrift*, Berlin, July, 1914.

other treasures, and then may be an echo of the origin of *Varuna* as the Moon, although *Nārāyana*, whilst absorbing *Varuna's* attributes, is represented as a form of the solar deity *Viṣṇu*. *Brahmā* and the other gods, all of post-Vedic invention, must be set aside as later intrusions and anachronisms.

THE OTHER SIX TREASURES "CHURNED" OR CREATED

After the emergence of the Moon, the various treasures which were "churned" or created follow one another in a definite evolutionary order (see the diagram for a graphic view).

The second treasure to emerge from the primeval waters was the goddess *Śrī*, a title in the later mythology, especially of the bountiful goddess of Good Fortune, and the wife of the supreme god of the *Visnuites*. Here she clearly represents "Kindly Mother-Earth" of the *Rig Veda* (10, 18, 10), that is, *Prithvī*, "The Broad Earth." She is thus literally identical with *Gaia*, "the Earth," the wife of *Ouranos*, of Greek myth, which also assigns to *Ouranos* and *Gaia* the parentage of gods and men (see diagram). She resembles *Aphrodite* in being ocean-born, and corresponds to the later *Venus*, and seemingly to *Frika*, the wife of *Odin*.

The third treasure was the goddess *Surā*, a goddess of light and heaven, in contradistinction to the Earth-goddess. She with the others of the first five treasures "took the *Aditya* path," that is, the path of the celestial luminaries. She is, I suggest, clearly the Dawn, that is, *Usas* of the Sanskrit, the *Eos* of the Greek and the *Isis* of Egypt. It is *Usas*, the Dawn, who in the *Rig Veda* (7, 77, 3,) "*leads the beautiful white horse*," which animal is identified in the context as the sun, at once her son and lover. This is precisely and literally her position in the churning. She comes immediately before, that is, "*leading the white steed*" which I identify with certainty as the sun. She also symbolizes the morning star as *Istar*, the *Tārā* of the Hindus.

As preceding in this way the Sun, *Usas* is termed in the *Rig Veda* "mother" of the sun, where the latter is known

both as *Sūrya* and *Savitri*;* whilst on the other hand, from the sun following her, like a lover, she is also called the "wife" of the sun (4, 5, 13; 7, 75, 5). Thus Nos. 3 and 4 form a second pair like Nos. 1 and 2, according to the dualistic form of the early procreative myths. Our churning myth, indeed, in this respect seems to clear up a confusion in Rig Veda history in regard to the sun and the disputed personality of those divinities of light, the *Asvins*. The *Asvins* are termed "the two husbands of *Sūryā*" (4, 43, 6; 1, 1195), and the latter is interpreted as the Sun, *considered as a female*.† But our churning tradition explains this otherwise. "*Sūryā*" in this regard seems to be *not* the sun, but *Surā*, the mother or wife of the Sun, which is conceived as twin coursers, the *Asvins* (see next paragraph).

How *Surā* comes in the Chakra-vartin's lists, to be represented by a "general" and of martial nature, is, I think, clear from the following descriptions of the Dawn goddess, *Uṣas*. In the Rig Veda she is armed with beams of light; she "drives away the darkness" (5, 80, 5-6); "wards off evil spirits" (7, 75, 1); "urges the living to motion" (4, 57, 8); "wakens the five tribes," and "shortens the ages of men" (1, 124, 2); "she reveals the paths of men" (7, 79, 1); "never infringes ordinances" (1, 92, 12); "never loses her directions" (5, 80, 4); "she renders good service to the gods" (1, 113, 9).

This martial character clearly identifies this water-born goddess with *Aphrodite Ourania*, also with *Athene* (?), and the Avestan goddess *Anāhita-Ardvī-Sūra*, who literally bears her name, and whose chariot was drawn by white horses,‡ *Diana*, and as mother of the Sun, and daughter (or wife) of *Ouranos* the *Asura*, who, I suggest, is Osiris (see No. 1 in diagram), whilst she (*Uṣas*) seems to represent Isis.

The fourth treasure to be created was "The White Swift Courser" *Turagaḥ*, which is certainly the Sun. In other versions the term used is *Aśva*, which is the ordinary word for a "horse." The positive identity of the white horse

* Macdonell, *Vedic Myth.*, 35, 48.

† *Ibid.*, 51.

‡ *Yast*, 5, 11, 13.

with the sun in the Rig Veda has been cited above. On the other hand, the general term "swift-courser" admits of the bird-symbolism, the sun in the Rig Veda being called "the fine-winged" bird (*Suparna*), analogous to the Egyptian sun-god *Horus-Ra* as the Hawk.

This equine symbolism for the sun as the *Aśva* or "horse," in relation to *Sūra*, throws significant new light upon those perplexing pair of divinities of light, the *Aśvins* or *Nasatya*, on whose identity there is no agreement. What they actually represented puzzled even the oldest Brahmanical commentators mentioned by Yāska so long ago as about 500 B.C.* That scholar remarked that some regarded them as Heaven and Earth, others as Day and Night, others as Sun and Moon, while the legendary writers took them to be "two kings, performers of holy acts." Yāska's own opinion, which is obscure, identifies them, thinks Roth, with *Indra* and the sun. Others regard them as the sun and moon, whilst Oldenberg and others believe they represent the morning and evening stars, which cannot, however, represent the pair, as the *Aśvins* or *Dioskuri* are eternally conjoined.†

My own opinion, based on the churning myth, approximates perhaps that of Yāska. It is that the *Aśvins* probably represent the Sun as a dual personality, as the outcome partly of the ancient symbolism of a horse (*Aśva*) for the sun, suggesting a two-horsed chariot; and partly suggested by the epithet of *Mitra* for the sun. *Mitra*, or "The Friend" (presumably the friend of man), suggests a companion. Hence in the prevalent dualism of early times the sun as "the swift courser" might readily be assumed to be a pair. One of the most frequently mentioned pair of gods in the Rig Veda is *Mitra-Varuna*, who in that combination generally represents the sun; although *Varuna* was more especially associated with the Moon, notwithstanding that "the eye of *Varuna* is the sun" (Rig Veda, 1, 50, 6). The car of the *Aśvins* is that of the sun itself (Rig Veda, 1, 115, 3).

* Macdonell, *Vedic Myth.*, 53.

† *Ibid.*, 53.

Savitri, or "the vinifier" (an epithet of the sun), is in their car (1, 34, 10), and so very special and frequent mention is made of their course *Varti*, that this word, with one exception, is applicable to them only in the Rig Veda.* This suggests to me that the word *Chakra-vartin* was probably used in post-Vedic times, when the "seven treasures" were transferred from the essentially lunar god *Varuna* to the solar *Aśvins*, with the rise of the *Visnu* cult.

This "white horse" of the ocean-treasures is manifestly identical with *Odin's* white steed, "the best of horses, *Sleipnir*."†

The fifth treasure "the (flashing) *Mani* gem, shining like the sun," I identify with the Lightning, symbolic of Indra, Zeus, or Jupiter. Its interpretation as the *Mani* gem has been established by Kuhn and Senart, and I have added further confirmatory details elsewhere.‡ In this *Visnuite* version of the churning, the gem is appropriated to *Visnu-Nārāyana*, as the *Kaustubha* jewel held at his breast. This, however, is a transparent synonymy for the thunderbolt-jewel, the *vajra*, which Indra holds at his waist or navel; for *Visnu* is also called *vajra-nabhi*, or "thunderbolt navelled," and it is from this jewel or *vajra* that the creative lotus-stem springs by which *Visnu* in post-Vedic Brahmanism creates the Brahmanical Trinity and the Universe.

The "Teutonic" representative of this jewel is clearly, I think, the *Brisinga-Men* (? *Mani*) jewel or necklace of *Odin's* wife, which *Thor*, the Scandinavian Jupiter, had to wear to recover his hammer (Grimm, *Teut. Myth.*, i., 307).

The sixth product of the creative churning was "the god *Dhanvantari*," holding the white cup of Ambrosia in hand. He is the mythical physician to the gods, and the divine messenger to man. He is, I consider, the divine Fire-priest, the homologue of *Hermes* or *Mercury*.

* Macdonell, *Vedic Myth.*, 50.

† Grimm, *Teutonic Myth.*, i. 154.

‡ My article, "Buddha's Diadem," *loc. cit.*

The seventh and last "treasure" was the great Nāga *Airovana*, who was "taken by the Holder of the Thunder-bolt." This is, of course, the famous white elephant on which Indra rides, symbolizing the thunder-cloud of that god. It represents for me the Spirit of Seasonable Rain and Vegetation, beneficial to man. This spirit of the huge elephantine bull of the sky, or rather the lower atmosphere, appears to represent the bull of the Assyrian *Assur* and of the Babylonian *Merodach*, and, on the other hand, by its bountiful bestowal of earthly and watery treasure, *Saturn* and *Dionysos*, god of corn and wine and saturnalia, with the roaring lion as his companion.

CONCLUSIONS

These are some of the more important outstanding results that are yielded by the discovery of this new source of light upon the pre-history and origins of the Aryan civilization.

The many new points of contact which are now revealed between the primitive traditions and beliefs of the various widely separated branches of the archaic Aryan stock, Asiatic and European, enable us to reconstruct to a greater extent than before the original proto-Aryan scheme of creation. We thus obtain a primitive Aryan view of the evolution of the universe and of the great gods upon a naturalistic basis long before the rise of Greece and one or two millenniums before the commencement of the Vedic period.

But most important of all, in linking up into unity the scattered elements of archaic Aryan tradition, and explaining many points in Grecian, Iranian, and Indian mythology hitherto deemed irreconcilable, our discovery brings the Aryan Creation-Myth, and with it the beginnings of our civilization, directly back to Babylon itself.

RUSSIA IN WAR TIME*

BY E. H. PARKER

By a curious coincidence I happened to be present in Russia at several critical and significant moments during the early development of the Russo-German War. Leaving Petrograd on Friday, July 24, I was astonished on arrival at Reval about daylight on Saturday to observe about forty Russian men-of-war in port, four having the appearance of Dreadnoughts, the rest cruisers, torpedo-boats, torpedo-destroyers, and (of this I am not sure) submarines; but all without exception equipped with wireless apparatus. Leaving in the afternoon, I was once more surprised to see eight or nine large Russian men-of-war steam into Reval as we steamed out. I presume this was the squadron that intended to visit Copenhagen to salute M. Poincaré, but which had been hastily recalled. On Monday the 27th I happened to get into conversation at Riga with a young Russian sergeant attached to the Governor's establishment. He informed me that it was doubtful if he could accept my invitation to dine at the Hagensberg Park that evening, as he had been suddenly mobilized, and might have to leave that very night for some unknown destination. There was already a good deal of talk in the town about the Austro-Servian complication, but it was not until we arrived at Pskov on the 30th that I noticed the unusual sight of soldiers selling their clothes in the market-place; one particular shirt went for tenpence, and a very serviceable frieze top-coat for four shillings. Inquiry elicited the fact that mobilization had begun, and these extra garments.

* Written on August 6, 1914.

would not be available as part of the kit allowed. The next day at Staraya Russa (a fashionable spa) the landlady seemed intensely interested in "the war," and I found (as I had already found at Pskov) that it was extremely difficult to purchase a Petrograd newspaper on the arrival of the metropolitan evening train. Here, also, soldiers were selling off "jumble lots," and a number of women in groups were observed to be crooning and weeping. Again the next day at Novgorod weeping women were the chief feature in the streets. No howling, "keening," or complaining, but simply silent wiping of the eyes and eager comparing of family notes. The soldiers and "called-up" classes of young men themselves seemed cheerful enough at the prospect of fighting; they were lying about the great St. Sophia Square, near the local Kremlin, where a number of officers were making hasty purchases of remounts from the villagers: an old woman told me she had sold four horses and sent two sons to the war. The noticeable feature in all these young men, whether uniformed or newly called up, was their extremely good physique and excellent teeth.

It must not be thought that there was anything venture-some in our wandering off to these comparatively unheard-of places: few tourists of any nationality ever dream of going there, unless it be for a practical cure, to the salt and mud baths of Staraya Russa. People at home will be surprised to know that you can sail from Dorpat to Pskov in a comfortable steamer. From Staraya Russa to Novgorod (though only a small steamer carries you for a couple of hours to the mouth of Lake Ilmen) the 1,500 ton steamer that takes you onwards across the lake to Novgorod is downright luxurious, with high-class cooking, besides being absurdly cheap. At one point you are "out of sight of land," and the weather and water can be pretty rough. From Novgorod we took a second steamer to Volkhovo, a junction on the River Volkhov where the Moscow train discharges and picks up Staraya Russa passengers from and

for Petrograd. Even these out-of-the-way steamers were overcrowded with mobilized officers and soldiers. Our programme was to take the Moscow train at 6.30 and arrive by 10.30 in Petrograd on Saturday. A young Belgian in Russian employ had tried to take a through ticket at Novgorod, but had been informed that, owing to the general mobilization, only one direct train from Moscow was running that day, no tickets were being issued, and that he had better go to Volkhovo by boat; this Belgian had also been mobilized, but in his case by telegram from his own country, to assist in repelling the expected German invasion. Imagine his and our horror when we found no Moscow train would arrive until 2.30 a.m., and that we should have to kick our heels for eight hours in the station (where, however, there was a fair waiting-room and buffet) or in the village. Small though the place was, here we first found what a deep impression the "German" war (no one spoke of Austria) had made upon the people. A kind of *djehad* was being preached in the streets; processions were formed and hymns sung by a bareheaded crowd of men and women carrying the Czar's portrait.

The train was already more than full of sleeping passengers when it arrived, but we made a wild rush for the first open door and just succeeded in wedging ourselves in, but only to stand or squat on the ground the whole way to Petrograd. One passenger committed suicide, his mind having perhaps become unhinged with excitement: women with babies, rich and poor, suffered severely. At Petrograd on Sunday the excitement was found to be intense, and the police seem to have come to the conclusion (the strikes being only just over) that it would be better to "nourish" than suppress a wave of enthusiasm so profitable to the Czar. In the afternoon the Czar suddenly arrived (from his retirement at Peterhof) at the Winter Palace; the yellow Imperial flag was hoisted, a salute of thirty-one guns was fired, the Czar made a speech to the vast crowd below from the balcony, and all the Imperial family in

Petrograd, besides all the highest civil, military, naval, and ecclesiastical chiefs, were convened to a solemn religious service held in the Nicholas Hall, when prayers were offered up for the victory of the Russian army. Among those present were the French Ambassador and the Servian Minister: probably at no time in his reign has the Czar been more popular than he was then and is now. Many of the processions, in addition to the Czar's portrait and the Russian flag, contained numerous banners marked "Long live Serbia!" "God save Slavdom!" etc., and in some cases France and England came in for complimentary legend inscribed upon banners. All over the metropolis there were evidences of active mobilization, such as droves of men answering to the call, limbering-up of guns, buying and allotting remounts, etc.; but all this was done with perfect decorum, quietness, and order. Never in Russian history has there been a more popular war, never has a foreign nation been so hated and despised by them as the Germans are now. It is the opinion of many responsible Russians that the recent strikes at the Putiloff works were really organized with German money, the idea being to create bad feeling just when President Poincaré arrived. It will be remembered that the French quite recently objected to German financial co-operation in these works. As a matter of fact we had witnessed the President's arrival in the morning of the 21st, and also his visit to the City Duma—i.e., the "Mansion House"—in the evening. The Czar did not appear in the streets that day, and there was very little street enthusiasm, for that very evening the tram-men had struck in sympathy with the Putiloff ironworkers, and doubtless this fact had some cooling effect upon popular and political enthusiasm—that was on July 31. On Monday, August 3, the patriotic processions went on, but the first wave of pious enthusiasm seemed to be gradually passing, and there were some signs of noisiness. Tuesday was, however, the Czar's name-day, and the chief streets were gaily decorated. As usual on such holidays, the banks were

closed all day, and those shops that opened at all did not do so till one o'clock. Meanwhile news arrived of the cowardly and insolent treatment by an ungenerous mob of the Russian Ambassador and his ladies as they left Berlin. This seems to have irritated the Petrograd patriots, who began during the evening to make "manifestations," smashing the windows of various German houses of business, and so on. But that was not all: towards ten o'clock on Tuesday evening a noisy procession began to throw stones at the German Embassy windows. This Embassy is a striking but vulgar and showy building next to the Italian Embassy in St. Isaac's Square; already when it was being built a few years ago people of taste were displeased at the self-assertive and tactless idea of placing a bronze copy of some apparently Greek sculpture on the roof in the shape of two huge horses tended by two naked warriors. It was felt that such a prominent and garish outline on the skyline, set cheek by jowl with the sacred Cathedral, was a grievous error in taste; yet at the time the Russian Government or municipality seems to have refrained from expostulation. Anyhow, the passions of the crowd were now roused by specific events, and I saw the wrecking. The Cathedral Square is a vast space capable of containing 100,000 spectators; mounted soldiers kept the manifestants back from actual contact with the Embassy, but the cobbles with which Petrograd streets are paved (coupled with the fact that several neighbouring streets were "up") afforded excellent opportunity to the crowd to fill their pockets and "shy" over the soldiers' heads. The soldiers luckily did not see fit to ride the crowd back; this was fortunate, for behind the actual stone-throwers were hundreds of curious spectators, including many forced guests marooned in the Grand, Astoria, Angleterre, and other neighbouring hotels, who would have been crushed and injured had the manifestants been forced back upon them. By eleven o'clock every one of the hundred or more of windows (say twelve hundred panes) had been smashed to atoms. Later on the crowd

gained entrance by a side-door, swarmed in, and began to pitch the furniture into the streets. The house was completely gutted, not a window-frame remained serviceable, not a scrap of furniture unbroken. The two Greek heroes, weighing many hundredweight apiece—probably several tons—were carried down by a host of willing bearers and pitched into the neighbouring Moika Canal. Throughout Wednesday amused crowds gathered to witness the sorry spectacle. To-day (Thursday) Prince Obolensky has posted notices stating that the processions, which had been allowed from July 26 onwards on the ground of their patriotic and orderly sentiment, must now be entirely discontinued. All the German Embassy windows have been boarded up, and the two horses, deprived by the mob of their naked Jehus, were now an object of both curiosity and derision, and at the urgent request of the "crowd" were quickly removed from the roof-parapet by the police and consigned to the Embassy courtyard.

Curiously enough, though Germany had been at war with Russia for nearly a week, the Austrian Embassy was working as usual, war not having been declared until 6.15 p.m. to-day. I visited it yesterday, and found the usual notices up in German, Hungarian, and Russian, stating that business hours were from 10 a.m. to 3 p.m. This Embassy lies back at some distance from all the others—the Turkish, British, Japanese, and French, are all in line on the Neva—in a comparatively secluded residential street; the only Embassy quite near to it is the American, an unpretentious building in a still remoter street. However, the precincts of the Austrian Embassy were strongly picketed with first-class mounted troops, and these pickets had been doubled when I went to see the place again to-day at 9 p.m. The Ambassador was packing, but had not yet gone; there seems to be no popular feeling whatever against Austria, who is quietly but universally assumed to be the puppet of Germany in this business. Count Pourtales, on the other hand, seems to have displayed considerable *gaucherie* in the way

he delivered his *note verbale*; one of his colleagues says he was overcome with very undiplomatic excitement and astonishment when called upon at midnight to proceed to M. Sazonoff's. The latter, after the expiry of twelve hours, "had no communication to make," in spite of the Count's solemnly reading out the note three successive times. Meanwhile the German Consul-General came rushing round in a fearful flurry to one of the subordinate officials attached to the American Embassy, in order to make immediate arrangements for his archives. Since then all signs of Germans seem to have disappeared from the capital. Even Russian Germans seem disgusted with the race to which, in a way, they belong. A remarkable fact was that one of the Englishmen doing subordinate Embassy work for the Americans was twice haled before the secret police because he was suspected of being a German (of much the same name) who was "wanted" for something he had done at Copenhagen and Archangel.

QUATRAINS* OF "OMAR KHAYYĀM"

(LINE FOR LINE TRANSLATIONS)

BY J. POLLEN, C.I.E.

KHAYYĀM ! for sin why sorrow so ?
 What profits great or little woe ?
 Who sins not cannot mercy know :
 For sin came Mercy here below.

In Schools, in Church, in Cloister, Cell,
 Some seek for Heaven, some fly from Hell ;
 But who, in soul, God's secret knows
 Such seed within his heart ne'er sows.

The Spring—a Fairy Form—and Wine—
 If these on meadow's slope be mine ;
 Though every one the thing should blame,
 Better a dog, if Heaven I'd name.

Parted from life, as well you know,
 Behind God's veil you need'st must go.
 Be glad, your " whence " you never knew,
 Your " whither " 's also hid from you.

* Sonnet-like, each one of these quatrains (attributed to Omar Khayyām) is complete in itself, and has not necessarily any connection with its fellow. The quatrains may be described as refined Limericks, their common mystical motive being "praise of Love and Wine." They have been composed, so as to speak, "mosaically"; but the little pieces have never been fitted together into one whole, except by the original genius of Fitzgerald. How many of them were written by Omar Khayyām himself is a matter of doubt ; but they came into being about his time. The translations follow the original Persian as closely as possible, and each line is translated as it stands.—J. POLLEN.

I slept. Said Wisdom, from the gloom,
 "In sleep Joy's rose can never bloom ;"
 "Why woo Death's sister thus ?" said he,
 "Drink wine ! you'll sleep eternally !"

"I pant for Wisdom," said my heart.
 "This, an Thou can'st, to me impart !"
 "Alif," I said. Cried heart, "No more
 If One 's at home—one word opes door."

No man may pass behind the veil
 Nor of its secrets tell the tale—
 In Earth's dull dust alone is rest,
 Drink wine ! here silence suiteth best !

To churls no mysteries reveal !
 From fools your secrets aye conceal !
 Your acts towards men consider well,
 Your hopes to no man ever tell !

'Twas writ "Whatever will be, will ;"
 The Pen moves on, come good or ill ;
 From first 'twas fixed—Creation's plan ;—
 To grieve or strive becomes not man.

In Spring to field or river's brim
 With comrades true, with maiden slim—
 Bring forth the cup ! Let morning's draught
 Free from the Mosque or Church be quaffed !

My girdle here is Heaven's bright blue—
 Thur's bed my tears have fretted through ;
 My bootless griefs have proved a Hell :—
 At peace—in Paradise I dwell !

To Houris Eden's bower is dear,
 Dearer to me the grape-juice clear ;
 Then take the cash ! let credit go !
 The drum—far off—sounds soft and low.

Drink wine, to sleep beneath the dust,
From Wife and Friend depart you must ;
To none this mystery explain—
"No Tulip withered blooms again."

Drink wine! In it's eternal life!
This points the term of youthful strife ;
To sport with friends, with rosy wine,
Means, once for all, a life divine.

Give Wine, it salves my wounded heart,
'Tis boon companion in Love's Mart ;
To me the dregs are dearer far
Than Heaven's high vault and shining star.

I drink ; my foes, on all sides, cry,
"Wine is the foe of God most high ;"
When this I heard, "'Tis right," I said,
"To drink the blood of foemen dread."

A ruby—Wine! The Cup—the Vine!
The Cup—the Body ; Soul—the Wine!
The crystal Cup laughs bubbling o'er.
Like tear that hides the bosom's gore.

My Form who gave—I cannot tell
If he assigned me Heaven or Hell ;
But food, and Wine, and loved one here
Are cash to me,—Heaven's credit there.

Both Good and Bad in Nature mixed
With Joy and Grief, by Fate are fixed ;
Blame not the Heavens! In Wisdom's way
More helpless far than you are they.

Whose heart bears trace of Love's sweet strife,
He never lost a day of life ;
Either he strives God's grace to gain—
Or quaffs the Wine-cup—free from pain.

Where blooms the rose or tulip-bed,
There crimson blood of Kings was shed ;
The violet springing from the Earth—
Some Mole of Beauty gave it birth.

Be wise !—for means of Life abate—
Take heed ! for sharp the sword of Fate ;
Tho' Fortune bring you almonds sweet,
Taste not, for in them poisons meet.

Wine—lover's lips—and meadow's slope—
Robbed me of Bliss and you of Hope ;
To Heaven or Hell man's doomed, but tell,—
Who came from Heaven or went to Hell ?

Oh, thou ! with cheek wild-rose in hue—
In face a Chinese Goddess true ;
Yestre'en to Babel's King thy glance
Did give the Chess-board's game of chance.

What's Balkh to me ? or what Baghdad ?
Life passes—be wine good or bad ;
Then drink ! for, when we've passed away,
The Moon will change from day to day.

SUPPLEMENT

OUR REVIEW OF BOOKS

TEN THOUSAND MILES WITH A DOG SLED. By Hudson Stuck. (London: *Werner, Laurie, Ltd.*) 420 pp., 8vo. Map and illustrations half-tone and colour. Price 10s. 6d. net.

The writer is the Archdeacon of the Yukon, and the book gives a rapid sketch of nearly fifteen thousand miles of travel covered on dog sleds as clerical tours of inspection in Alaska. The work is fairly free from references to religious matters, but contains several iterations with respect to loose morals in the rough population of the Alaskan towns; it is readable, but hardly as informative as one might wish or expect from a man of the author's experience—*e.g.*, much more might have been written on the natives. There is a good dog-story full of human element, and the illustrations are capital photographs creditably reproduced.—J.

THE PAN ANGLES: A CONSIDERATION OF THE FEDERATION OF THE SEVEN ENGLISH-SPEAKING NATIONS. By Sinclair Kennedy. (*Longmans, Green and Co.*) 244 pp. and a map. Price 7s. 6d.

The title of this book seems unfortunate; notwithstanding all the pleadings of the author that it best conveys his meaning, one feels tempted to associate it with some freak of futurism, cubism, or other geometric travesty of art, and its iteration throughout the book proves irksome to a degree. "Pan Angles," then, are the nations which use English as a common tongue, or the populations of which are either entirely or chiefly of British origin, or in some way dependencies of the British Crown; a glance at the map at the end of the book makes it clearer than any words; their areas are coloured in an aggressive red, and, strange to say, Japan has received a dab of the same colour!

The author takes his reader through an historical synopsis of British civilization, then a study of the English-speaking peoples, a long chapter dealing with individualism in the State and Parliamentary institutions, a chapter on the seven nations wholly explanatory of the title, and a review of their forms of government.

These five chapters account for half the book, and they contain much information digested and marshalled with skill, although rather one-sided in its sources and rich in peculiar dicta. The author wholly believes in the absolute assimilation into the English-speaking fold of the foreigners who emigrate to "Pan Angle" countries and seek naturalization. "He learns

words which express ideas peculiar to Pan Angle psychology. . . . The pride of the Pan Angle comes over him, and a faith in those precepts of individual freedom of which he never dreamed, it may be, until he learned to read and talk of them in English." The author has, I suppose, heard of the French republic, and he would doubtless agree that German pride—vanity shall we say—is hard to beat. He vents the same opinion further on in the book when dealing with immigration in America, forgetting that the United States are, like Joseph's coat, patchy, and their ethnography confused by the influx of European immigrants, *some* of whom became *not* Americans with citizenship, but hyphenated mongrels at best.

The sixth chapter, "Dangers," is deliberate and misleading; how much so the present state of war in Europe shows plainly. The author sees dangers ahead for the English-speaking peoples: China and Russia in the dim future, Japan and Germany in the immediate future. But why saddle Japan with intentions she does not possess? Why adduce as an argument her very name "Great" Japan and see in it a menace, since it was used in the early days of the Christian era before Yankee-doodle could ever be prophesied? Why say that Japan was urged by the British Isles to fight Russia for its very existence? Japan needed neither prompting nor help. The attitude of the Americans towards Japan is insane, and constitutes a menace for Japan, not *vice versa*. A Yankee Admiral in 1852 dictated terms to Japan with an arrogance worthy of the German Foreign Office; now another Admiral Mahan looks upon the Japanese as unassimilable, and the author sees Japan threatening the U.S.A. *and* the whole of the English-speaking race. Ludicrous! But whereas he would fight Japan, he would ally himself with Germany, *because* Germany is a source of danger to the "Pan Angles." *De plus fort en plus fort*; the author should read Cicero. Perhaps *now* he will realize his error.

But the sum-total of the book is that the seven English-speaking nations—England and her dominions and the United States—should have a common Government, nay, more, *a common capital built on the frontier between Canada and the United States* (I guess that's going some!), and one wonders where the individuality of the English would come in. Federation has its uses, but has it fully succeeded in God's own country, where marriage laws (forty-eight of them), divorce laws, company laws, and what not, vary from state to state?

No, I have read this book twice from cover to cover. I have been shocked by queer vocables such as "fifteen hundreds" for fifteenth century, "seeming" for seemly, and a few others; amazed by such statements as this, "people who are strong enough make no alliances," being passed for press in 1914 when all Europe depends on alliances. I have rubbed my eyes on seeing much-abused Japan, including Korea, besmeared with Pan Angle red, and my conclusion is that the author has not made his case. He thinks external pressure may turn dreams of federation into practical politics; I doubt it, now the British dependencies are helping the Motherland to fight the unprincipled, arrogant Germany. Where is America, the predominant partner in the author's dream? Where, with its 14 per cent. of assimilated foreigners in its Congress? Now is the time for

the States to show whether their practical sense in world politics is better than their marriage laws, and of that this book gives no hint, though if the centre of the race has moved across the Atlantic, "as Franklin foresaw," if the States are "Pan Angles" at heart, no better opportunity than now could offer for them to prove it in a practical manner.—H. L. J.

The third quarterly number of Vol. XII. (1914) of the "Bulletin of the Imperial Institute," just published, contains among the results of recent investigations conducted by the scientific and technical staff of the Institute, Reports on Economic Products from the Zanzibar Protectorate, Wheat from the Sudan, Peas and Beans from Burma, Timbers from Various Countries, Para Rubber from the Gold Coast and Sierra Leone, Funtumia Rubber from the Gold Coast, and Ceara Rubber from Papua.

A special article on the Agricultural Resources of the Zanzibar Protectorate, by F. C. McClellan, Director of Agriculture, Zanzibar, describes the climate and system of land tenure in this portion of the Empire, discusses questions of labour and wages, and deals fully with crops and produce, the chief of which are cocoanuts and cloves. In the latter article Zanzibar has practically a monopoly of production.

In connection with the campaign for the capture of German trade, an article on the Trade in Palm Kernels is of importance as showing that a large proportion of the exports of palm kernels from West Africa are shipped to Germany, where they are used as the source of palm kernel oil and of cake for feeding livestock, much of the palm kernel oil being re-shipped to this country. This important trade and industry, which could quite well be carried on in this country, is fully discussed.

Other articles deal with the Utilization of Waste Fish as a Source of Manure; the Tin Resources of Australia, South Africa, and Nigeria; and the Trade and Industries of Seychelles.

PERSIA AND THE BALKANS: TRAVEL AND POLITICS IN PERSIA AND THE BALKANS. THE ORIENT EXPRESS. By Arthur Moore, F.R.G.S. (Constable, 1914.) Price 7s. 6d. net.

This is not, as might be expected from the inadequate title, merely a narrative of travel in the regions of the Near East traversed by this famous transcontinental express. It is a first-hand study, based largely upon personal experiences and interviews with leading statesmen, of the political and social conditions of Persia of to-day. This occupies about half of the book. The rest is concerned with the rise of the Ottoman Constitution, the downfall of Sultan Abdul Hamid, and the Balkan War.

Mr. Moore goes very fully into the causes of the anarchy and national unrest which prevails in Persia, only slightly arrested by the new gendarmerie officered by Swedes, and is of opinion that the salvation of the country is impossible unless a general disarmament is carried out by the Government. He also maintains that it is the interference of foreign Powers which cripples the development of Persia, and that, in short, if Persia were left alone, she would *fara da se*.

In telling the story of the rise of New Turkey, Mr. Moore is on well-tilled ground, but we get fresh views and a broad outlook in his criticism of the policy of the Young Turkey party. His narrative is relieved with many anecdotes. One of the most characteristic is that of the shooting of Osman Hydet Pasha, Governor of Monastir. On learning the news of the outbreak of the revolution in this city, the Sultan sent a telegram which the Governor was instructed to read to the garrison. It began with threats, but wound up with promises and soft words. Unfortunately the Governor was shot before he got to the end of the telegram!

In dealing with the Balkan War, the author is fair and judicial, and does not hesitate to blame the intrigues which made the Bulgarian army (which did all the heavy work) the catspaw of the Balkan League. "It was Bulgaria that broke the power of the Turks in Europe. . . . The Bulgarian blood which ran like water in Thrace in those early all-important hours of the war was the tide upon which Greek and Serb have floated to a new heritage."

The author's style is so picturesque and brilliant that even when he dives deeply into the tortuous and contradictory policy of the Balkan League, he is entertaining as well as instructive; a master of neat phrases, he sums up the racial situation pithily and convincingly.

Mr. Moore's travels in Albania are vividly described, and are of some geographical value, and of special interest now that we have seen the birth of the newest of the Balkan States.—E. A. R. B.

VIŚVAKARMĀ. Part viii. *Luzac*. 4s. (Rs. 3).

This fascicule completes the first series of Dr. Ananda K. Coomaraswami's selection of Indian works of art, and consists of twenty collotype plates of sculpture, a short preface, and a list of the photographs published in the whole work. The present part may suffice to give an idea of the scope of the complete work; the plates are well reproduced, and thoughtfully mounted on paper guards for purposes of binding. The originals represented are of interest. Unfortunately, in too many cases they have suffered heavily from decay or from breakages; judging from the list, many of them have been published in various works more or less difficult of access now, but we can hardly follow the author's too prophetic statement that the series "includes at least a considerable proportion of the most important sculptures known or likely to be recovered in future." One feels thankful to Dr. Coomaraswami for all the books and publications in which he has of late years brought the Eastern arts and crafts before the European student, and in consequence it seems a pity that he should have refrained from writing himself the introduction to his *Viśvakarmā*; one would have liked to learn from his own pen the reasons which dictated his selection. We say this because Mr. Gill's preface contains an unreasonable tilt at the art of Greece, "specious and inferior to that of its archaic predecessors." Archaism *per se* is a bad thing to worship—Mr. Gill, we think, might recognize that (he seems inclined to do so on p. 5)—and rough-hewn images of a god do not postulate dignity or grandeur of

thoughts on the part of the sculptor, they are too often the relics of unskilled workmanship. Let us once and for all be candid about it: a sculptor may wish to convey dignity or horror, and make a hash of it if he is a wretched modeller. A few hundred or thousand years later the quaintness of his ill-shapen work will attract some crank; it may command a high price for that reason, but all the same it is not Art. Surely in any country and at any time the finest expression of religious ideals or of secular thoughts was attained only by those artists who combined with their inspiration the fullest executive skill. Such relics of the past form the majority of this book, and the selection of the plates previously published and not before us now, has apparently not been unduly affected by the complicated views on "primitive" art held by Mr. Gill. This art of India shows a high level of thought and craftsmanship; it is not "primitive," far from it.—H. L. J.

THE MISCELLANY OF A JAPANESE PRIEST (*Tsuru-zurû-Gusa*). By William N. Porter. (*Milford*, 1914.) Cloth, 2s. 6d. net.

The jottings of Kenko Hoshi, leisurely penned *circa* 1337-39, have attracted much attention in Japan; several editions exist, illustrated by some of the Ukiyô painters of the Tokugawa period, besides translations into European languages (though chiefly fragmentary), and the thoughts of the good priest can now be read fully in English in two complete translations, one by Mr. Wakameda, the other by Mr. W. N. Porter, published within a few weeks of one another.

Needless to say, much of the charm of this book is lost to the European; its style and rhythm, its apparently simple and sometimes tedious aphorisms and teachings, are the predominant causes of its value as a classic in European eyes. But Mr. Porter, whose rendering of Japanese verse into English has met with recognition here, has contrived to make a readable book, perhaps because he has now and then paraphrased, rather than translated literally, the crisp sentences of the original. The numerous explanatory notes are useful, more scholarly than Wakameda's, though curiously touching almost the same ground, and not wholly free from criticism—e.g., there seems to be a confusion about *boro-boro* (115, A), and also about *Bonji*. The definition of Kusudama is inaccurate; the characters for Shiô (salt) and the *Kana*, on p. 195, are from bad founts. The "casting out of stepsons" is an adaptation of the original text: "When playing *mamako daté* with *Sugoroku* pawns no one can tell which stone will be 'taken' first," etc.; in fact, it is a counting-out game akin in effect to the problem of Josephus, which we find introduced into Japanese mathematics three centuries later.

Mr. Porter's translation is a book worth reading and picking up at random, to find short moral lessons with an old world flavour. A more complete biographical notice of Kenkô bibliographical references, and perhaps a few illustrations from older editions than those selected (and capitally reproduced), would have been acceptable.—KOSU-
GIKEN.

OFFICIAL NOTIFICATIONS

INDIAN FIELD AMBULANCE TRAINING CORPS

THE Indian Field Ambulance Training Corps, under the command of Lieutenant-Colonel R. J. Baker, Indian Medical Service (retired), is now in training in London and in its week-end camp at Eastcote.

A detachment of thirty men, including four medical officers (or civil medical practitioners), four clerks, four cooks, and nineteen ward orderlies has been supplied by the Corps, in response to a request from the War Office, and has started for Netley Hospital under the command of Lieutenant-Colonel Sharman, Indian Medical Service (retired), to serve in connection with the Indian troops. A further small detachment of nursing orderlies has been supplied by the Corps for emergency service on hospital ships. And the probability is that the War Office will make further requests for men to serve in similar capacities as time goes on. Recruits giving their services will, of course, come under military discipline, and will receive such pay as the War Office allows. The rates of pay offered up till now have been for clerks, cooks, and orderlies, 4s. a day, for subordinate medical assistants, 10s. a day, and for medical officers (or civil medical practitioners) 20s. a day. In all cases hitherto rations and lodgings have also been provided. Qualified medical men are eligible for the better-paid positions. Students with medical training or with some experience of ambulance

work can be very useful in nursing and interpreting; and others may be of use in other ways.

Any Indian student now in training in London, Oxford, Cambridge, Edinburgh, or any other University centres, who desires to avail himself of such opportunities of active service as the War Office may offer to the Corps in future, can apply to serve with the Indian Field Ambulance Training Corps. He would be required to report himself in London, and might with advantage join the week-end camp at Eastcote. But, if convenient, he might continue to do the bulk of his training at the centre where he resides. All applications for permission to serve with the Indian Field Ambulance Corps should be addressed to Lieutenant-Colonel Baker, Indian Medical Service (retired), India Office, London, S.W.

INDIAN CIVIL VETERINARY DEPARTMENT

The Secretary of State for India in Council notifies that, so far as is known at present, one vacancy in the Veterinary Department will be filled in 1916.

The Secretary of State for India has received the following telegram from the Viceroy, dated October 20:

“The week's rainfall has been in excess in the west part of the United Provinces, in the Punjab, Kashmir, the North-West Frontier Province, Rajputana, Malabar, and the south-east part of Madras; it has been normal in Assam and Sind; fair in Konkan and Mysore; elsewhere it has been scanty. The rainfall prospects of the peninsula for the near future are not good except in the extreme south.”

The Secretary of State for India is informed by the Viceroy that, in pursuance of Section 3 of the Indian High Courts Act, 1911 (1 and 2 Geo. V., cap. 18), the Governor-General in Council is pleased to appoint William Ewart

Greaves, Esq., Barrister-at-law, to be a temporary Additional Judge of the High Court of Judicature at Fort William in Bengal for a period of two years, with effect from the date on which he takes his seat in the said Court.

The King has been pleased to approve the appointment of Sir John Edward Power Wallis, Kt., Judge of the High Court of Madras, to be Chief Justice of Madras in succession to Sir Arnold White, who has retired.

The Marquess of Crewe, K.G., Secretary of State for India, has appointed Sir Frederick William Duke, K.C.I.E., C.S.I., Indian Civil Service, to be a member of the Council of India in succession to Sir James Digges La Touche, K.C.S.I., who is about to retire on the expiration of his term of office.

CORRESPONDENCE

"A FAIR HEARING AND NO FAVOUR"

A DESIRABLE REFORM

TO THE EDITOR OF THE "ASIATIC REVIEW"

DEAR SIR,

An article recently published in the *Pioneer*, and reproduced in the *Pioneer Mail* of July 24 last, under the heading "A Cheap Social Reform," does not appear to have attracted the attention it deserves. I say this not merely because of the novelty of the suggestion contained therein, but because of its apparent simplicity and usefulness, and I feel that no apology on my part is needed for referring to the subject and enlarging on the theme.

Briefly stated, the *Pioneer* advocates that with a view to helping the working classes in India, and in order to save them from the necessity for what it terms "petty borrowing," wages earned in our Eastern Empire should be paid, as in Europe, weekly instead of monthly.

"As everyone acquainted with India is aware," says the *Pioneer*, "the system that has obtained generally from time immemorial . . . is to pay salaries by the month, irrespective of the status of the recipient. Thus, the Commissioner of a Division is paid by the month, a guard on the railway is paid by the month, and a municipal sweeper is paid by the month. In this respect there is no distinction whatever between the salaried officer and the working

man. . . . We see everywhere that the man on small pay habitually borrows relatively small sums of money, and the ordinary interest he is called upon to pay for the accommodation is an anna in the rupee per mensem, or 75 per cent. per annum ! That this petty borrowing should be the almost universal thing it is among the humbler classes of employees may undoubtedly be ascribed very much to the system which leaves this long interval between one pay day and another."

The *Pioneer* goes on to explain that it is the weekly payment of wages, the weekly rent day, and the weekly settlement of accounts that enable the wage-earner at home to get along without recourse to the moneylender, and surmises that if wages in England were generally paid monthly instead of weekly, "the country would soon be overrun by small moneylenders whose special business it would be to prey upon the needs of the shortsighted and improvident. But this is very much the position we find in India."

It might be argued that in England also the moneylender is by no means a *rara avis*, but there are few, we imagine, who would contend that his chief business lies with the wage-earner. On the contrary, his touting circulars are as a rule addressed to bigger fry, and it is the middle classes and improvident gentry who are his prey. If it were not so, it is certain that he would not make a living out of working men, who are far too independent, and are never borrowers except, perhaps, in times of emergency or great stress, when they prefer the convenience of a pawnshop. The circumstances at home and in India in regard to borrowing are, in short, entirely different, and I agree with the *Pioneer* that this is largely due to the fact that in one country wages and debts are paid by the week, in the other by the month. No reflecting person can fail to appreciate the perniciousness of a system which recognizes a lengthy credit, a month's "tick" at least for the poorest working man ! Small wonder that the method of giving

vouchers—or, as it is called, signing “chits”—instead of paying cash, chits which are very easily forgotten during the long interval between signature and payment of the debt, are often the cause of getting men into difficulties and driving them to the moneylender.

To quote further from the *Pioneer*: “For those who require to borrow relatively large sums, as in India, for wedding ceremonies or to meet unusual expenses . . . the Government has already done a good deal by establishing or encouraging co-operative banking societies, but these hardly cater for the class we refer to—namely, wage-earners—who on monthly salaries have not sufficient foresight or strength of character, or who, for other reasons, are unable to ‘manage’ for so long a period without borrowing.

“It is comparatively easy to tide over a week on the wages of a week, but it is infinitely more difficult on comparatively small pay to ‘carry on’ for a whole month. Take the case of the newly employed man, who gets nothing until he has served for at least a month (more probably thirty-five or thirty-six days), how is he to exist without borrowing? And having once glided into debt, how can he ever get clear of it?”

The arguments of the *Pioneer* appear incontrovertible, though perhaps they will best be realized and understood by those who have themselves had to work in India on small pay, surrounded by every facility and temptation to borrow. Human nature is human nature all the world over, and it is futile to rail at the wage-earner because he appears improvident. Custom, or what is known in India as “dustoor,” dies hard, and if it is the “dustoor” for the wage-earner to borrow a few rupees each month at ruinous interest, then surely it is desirable to look into and examine the cause, applying such remedy as is possible, rather than to accept the fact and allow things to drift.

During the past fifty years, or, say, since the introduction of railways into India, large and increasing numbers of working men are employed; a new class has sprung into

being since pre-Mutiny days, and India is no longer a country of relatively well-to-do officials. On the other hand, there are numbers of people who are usually, and we think incorrectly, stigmatized and referred to as of the *subordinate* grade ; it is in regard to these that my remarks particularly apply. They form a community employed by the railways, in mills, factories, mines, and other industrial enterprises. This community consists of Europeans, Anglo-Indians, and Indians ; many of them perform onerous and responsible duties ; nearly all of them are married and have families to support ; their wage is paid monthly, their servants and dependents are paid monthly, and their accounts are supposed to be settled monthly. Their cash transactions are ordinarily limited to those items only for which credit cannot be got, and a large proportion of them are either in debt or live without saving, their sole aim being to exist from one pay day to the next.

So far as the European and Anglo-Indian are concerned, many of us can remember the days when credit used practically to be forced on them ; it can still be only too readily obtained. The introduction of the value payable post and the cash system of payment introduced by those pioneers of provident living, Messrs. Whileaway, Laidlaw and Co., have happily done some good in restricting unlimited credit, but there are always those who, charging higher prices, are willing to allow debts to be run up by men in regular employment, and there are always Indian moneylenders who will give loans on personal security, attachment of pay through the law courts being the ordinary and simple course of recovery when other means fail. The number of "court attachments" against the wages of the employees of any large company, or, indeed, against Government "subordinates," is a clear if inadequate indication of the indebtedness of the working classes in India. It is hardly conceivable that such a state of affairs would exist if wages were paid weekly ; moneylenders would hesitate to lend to the weekly paid man even if the weekly paid man still

wanted to borrow. Long credits would cease altogether, and the position would automatically become what it is in Europe. Can there be any doubt that if such a result could be achieved the benefit both to the employer and the employee would outbalance any small difficulty there might be in initiating and generally introducing the change?

The main idea of the proposal is not only to help the wage-earner, but also to hit the moneylender, the man who preys on the weakness of the poor and flourishes by usury. If it is asked what class of persons should be considered wage-earners, or where the line should be drawn between salaried officials and other employees, then it might be suggested that all drawing less than Rs. 250 per mensem should be paid weekly. Objections are sure to be raised; there are those who will say, "We cannot go into decimals and details, how could you pay a man by the week who only earns 8 shillings a month?" For our part we fail to see any greater difficulty in doing this in India than in paying weekly wages in England. It might as well be asked how the great industrial insurance companies at home collect as little as threepence a week from the insured!

But enough has been said; there is no need to labour the point. It is not for me to work out every detail; rather let the suggestion be considered on its merits by the Government and by those in authority, for there is undoubtedly much to be argued in favour of it. As the *Pioneer* concludes, "Many other points will occur to those who give the subject a thought, and we would only add that we would not for a moment advocate the changing of the status of employees, who should still remain monthly servants, even if paid weekly. . . . The question is well worth consideration. Surely, when Government is showing itself so much alive to the evils of the indebtedness which presses down the people, it will not, Naamanlike, turn from one means of remedy because it is cheap and simple."

G. H.

August 28, 1914.

COMMERCIAL NOTES

THE ENCOURAGEMENT OF BRITISH TRADE

I.

THE CASE FOR CANE SUGAR

Now that the supply of beet sugar from Germany and Austria is stopped, it is opportune to turn our serious attention to the sugar-growing resources of the British Empire, and consider the best means of developing its almost unlimited capacity for the production of cane sugar.

Pure cane sugar is a much superior article than that produced from beets, which from their soft, quickly decomposing nature, do not admit of complete refinement. More than 88 per cent. of refined cane sugar is produced from the raw article. The cane molasses is a valuable by-product, almost equal in its sweetening capacity to that of crystallized cane sugar. Beet molasses, on the contrary, is highly charged with impurities, and has a "fusty smell, and a nauseous, bitter taste" ("Chemistry and Sugar," by J. Mackintosh).

The beet itself is a doubtfully profitable crop for the British farmer, requiring very heavy manuring and much labour. The crop is greatly affected by atmospheric conditions, and the capital required for a modern sugar-refining plant is very considerable.

From a sanitary point of view the inevitable introduction of the huge swarms of flies attendant on sugar refineries

must be a consideration in a thickly populated country. We urge, therefore, that the efforts of the Government and the taste of the people be directed rather towards the stimulation of our own Imperial cane sugar supply than the encouragement of the inferior beet product.

Sugar thrives in tropical and subtropical soils of open clay or loam, the rich volcanic loams of Hawaii yielding 100 tons to the acre. Java—the world's "model sugar farm"—yields about 40 tons to the acre; the crop is alternated with rice and beans. In 1910-11 Java exported 1,182,653 tons of sugar. "The ample investment of funds in the newest machinery, the acting of the sugar experiment stations, the adequate training of sugar chemists and factory chiefs, all these have contributed towards making the Java sugar industry a model one of which it may be highly proud" ("Cane Sugar Industry," by Geerligs).

There is no reason why, with a little encouragement, India should not emulate Java's industry. The sugar-cane has been an important product of India since historic times. Tradition says it was created by Vishva Mitra to be the heavenly food of an earthly Paradise.

It is mentioned in the "Atharva Veda": "I have crowned thee with a shooting sugar-cane, so that thou shalt not be averse to me."

In 1913 the total area under sugar in India was 2,370,000 acres; the same year 617,500 cwts. of cane, and 57,000 of Austrian beet was imported. In 1911, owing to the failure of the European beet crop, India exported 26,732 cwts. of refined sugar to England, otherwise she consumes all she grows. Yet, with improved methods and production, India is capable of supplying the markets of the whole world. Egypt produces about 44,403 tons of sugar. The industry has declined since the wholesale planting of cotton, which has not been an entire success. The chief need is for new canes, which are being imported, but not in sufficient numbers, from Java.

Vast areas in Queensland and New South Wales are suitable for sugar planting, but the industry, although encouraged by the Australian Government, is hampered by labour difficulties. But with an increased and steady demand for pure cane sugar we may look for a speedy reorganization of the labour question on a sounder footing. The same may be said of Natal, which is more than capable of supplying the whole of South Africa, which at present imports largely, with sugar. In 1912 Natal produced 106,000 tons of raw sugar.

Cane sugar is not only an essential food for the blood, it has strong antiseptic qualities in its concentrated form, and in regard to its feeding and sweetening properties is not only the purest, but the cheapest, form of sugar.

In 1911-12, of the world's production of sugar, 56 per cent. only was cane (in spite of the failure of the beet crop on the Continent)—*i.e.*, 8,648,010 tons of cane, and 6,801,000 tons of beet.

Great Britain consumes 91 pounds per head per annum, of which the great proportion has hitherto been German beet. Owing, as we do, the great sugar-producing areas of the world, it is surely not too much to urge that we refuse the German-Austrian article, and depend for our supply on our own Imperial cane sugar.

This series will be continued with an article on "Honey" in the January issue.

"THE SUBALTERNS' WAR," 1885-1888*

BY LIEUTENANT-COLONEL A. C. YATE

I DO not know who christened it "The Subalterns' War," or whether that popular designation emanated from Simla, Mandalay, or some jungle outpost. Sir Charles Crosthwaite, whose most interesting and well-written volume appeared in February, 1912, prefers to entitle his work, "The Pacification of Burma." But, then, Sir Charles was a Chief Commissioner, and, as such, pacification was his *métier*. Sir Charles would have been perfect if he could have added to the administrative experiences of a Provincial Head a practical knowledge of the activities of a mere subaltern. The fighting spirit is there, as may be judged from his letter to the *Times* of August 9, 1913, in reply to Lord Crewe's public, but calculated, censure of Sir T. Hewitt's action in the Sitapur case. It was as a mere subaltern that, in February, 1887, I wrote, from Yamethen, to *Blackwood's Magazine* a paper entitled "Burma Reformed," in which I endeavoured to reproduce the vivid impressions fresh-stamped on my brain of three months devoted to the relentless pursuit of the rebel Burman. From April to

* 1. "Our Pacification of Burma," by Sir Charles Crosthwaite, K.C.S.I. (Edward Arnold, 1912. 16s. net).

2. "Burma under British Rule," by Joseph Dantremer, translated, with an Introduction by Sir J. G. Scott, K.C.I.E. (Fisher Unwin, 1913. 15s. net).

3. "A Civil Servant in Burma," by Sir Herbert Thirkell White (Arnold, 1913. 12s. 6d. net).

October, 1886, I had been employed in the Intelligence Division at India Army Headquarters in preparing, among other work, a weekly bulletin, for the information of the Secretary of State for and Government of India, of all that took place in Upper Burma. The situation there in the hot weather of 1886 was serious, and caused anxiety to the authorities at Simla and at the India Office. Every telegram and despatch from and to Mandalay, every communication that passed between the Commander-in-Chief, Sir Frederick Roberts, and the Military Member, Sir George Chesney—everything, in short, that bore upon the task which the Home Government had entrusted to the Viceroy of India, Lord Dufferin—viz., that of making the Burmese Empire an *annexe* of that of India—was placed in my hands; and my duty it was to compile therefrom a narrative which would keep the Supreme Government duly informed of the state of affairs in Burma. This narrative was reprinted in Blue-books, Burma, No. 3 of 1886 and No. 1 of 1887, and is bare and brief, as befits a Blue-book. When my regiment, the 1st Baluchis, was ordered to Burma, I handed over my work at Simla, and joined my regiment in October, 1886, at Rangoon. How matters stood in Burma in the summer of 1886, the words I am about to quote (from *Blackwood*, May, 1887, p. 711) will testify:

"To loot mails and convoys; ambuscade small bodies of troops; shoot down officers and men from almost inaccessible places in scarcely penetrable jungle; to rush unprotected and weakly-garrisoned posts; to shoot sentries at night; to fire and pillage villages friendly to or under the protection of the British forces and massacre their inhabitants; to quarter themselves and their adherents on any unprotected village, extorting supplies, money, arms, and recruits—the penalty of refusal being death and destruction of property by fire or plunder; to make stern examples of those Burmans whom they deemed traitors to the national cause by putting them to the horrible death of crucifixion *à la Birmanienne* (it is to be feared that this fate befell even

one or two British subjects who were taken prisoners)—such were some of the main features of the activities of the rebel Burmese forces."

The first duty which awaited my regiment on its arrival at Rangoon was the very sad one of parading for the funeral obsequies of that most gallant soldier, General Sir Herbert Macpherson. Directly that was over, Captain A. L. Sinclair's wing (400 bayonets), of which I was senior subaltern, started from Rangoon in flat-bottomed stern-wheelers, via Maubin, Prome, Minhla, and Minbu for Myingyan. Cholera boarded us on the way up, and claimed several victims. The mosquitoes of Maubin and the night-beetles of Prome—both in their myriads—still linger in my memory. Our march from Myingyan to Yamethen had but one notable feature—mud. We had a convoy of 200 bullock-carts of supplies. How the bullocks towed them into axle-deep of mud, and then left our stanch and stalwart sepoy (Sikhs, Punjabis, Pathans, Sindhis, and a few Baluchis in those days) to haul them out; how we bridged in a day with jungle-cut material a swollen stream 30 feet broad, running swift between deep and steep banks, and passed the 200 carts over them by hand, the bullocks swimming across at the usual ford; this is best described in a letter written by me from Wundwin on November 17, 1886:

"After our voyage up the Irrawaddy, which lasted a fortnight, we landed at Myingyan on November the 4th (1886), and on the 7th started for our destination, a largish town and military station called Yamethen, some 150 miles S.S.E. of Mandalay. We have had a pretty march of it, being accompanied by 200 country bullock-carts, of which the average rate of progress is one mile per hour. This is absolute fact, not a *façon de parler*. From the 8th to the 10th we had continuous and heavy rain, which drenched us, and flooded the roads. In places our men had to strip and pull the carts through mud and water 2 to 3 feet deep and up to 150 yards in width. Since the 10th this has

been an almost every-day occurrence. Most of our road was unknown, having never before been traversed by our troops. About sixty men, with axes, bill-hooks, spades, and pickaxes, preceded the column, and cut a track for the carts through the jungle, wherever the so-called road was found to be flooded, provided always that the jungle in its vicinity was not also flooded. Marching from 6 a.m., to 3, 4, or 5 p.m., at the rate of one mile per hour, making our own road, is, I can assure you, not very amusing. While it rained it was at least cool ; but since the rain stopped on the 10th, it has been stifling and scorching, as our noses, necks, and hands testify. However, we are all very fit. Of 'dacoits' we have seen nothing. There is a band 300 or 400 strong stockaded ten or twelve miles from here, but we are not allowed to go out of our way to attack it. A force is being sent out from Meiktila for that purpose."

I remember a distinguished Brigadier saying to us at Myingyan : " If you are fired on from the jungle, face each rank outward." We did keep small advanced and rear-guards as nuclei, but most of all ranks were busy with the convoy. My description of a column marching in Burma (*Blackwood*, May, 1887, pp. 712-713) is couched in these terms : " A column is marching along a narrow path or an open river-bed (Burmice, *chaung*), flanked in either case by dense jungle, and in the case of the *chaung* by high, often precipitous, banks. All who have experience of Burmese warfare know that, in very close jungle, it is practically impossible to work flanking parties consistently with the reasonably rapid progress of the column. The flankers, too, are apt to get lost. Consequently, the column pushes on with the usual advanced guard."

In "The Subalterns' War" no one learnt better how to tackle and confront the Burman than the subaltern. In the very first expedition against a rebel Boh in which I served, the wily Boh, evading the main column, fell upon the supply escort of forty Somersets and Baluchis under Lieutenants Aspinall and Morse, and having laid eleven

low with wounds, obliged the whole party to fall back, carrying their wounded with them. When this attack was made, I, with thirty Baluchis, a guide, and an interpreter, was moving along as the advanced guard of the main column under Colonel Butler, of the Madras Army. The sound of firing came from my left front, and seemed quite close. My instinct was to march to the sound of the guns, but the guide said, "Hopeless! you must make a detour." So off my thirty men and I went at a double, following the guide, and during the next hour or more traversed a succession of breastworks on either side, and, finally, occupied the main stockade (*Zedigön*) of the Lay-wun (his band was reported to number about 1,000); but, alas! the sound of firing had ceased. I was too late to succour the gallant little escort, and of our foe only a few stray shots and an occasional figure indicated the proximity. When I rejoined the main column at nightfall, I found them comfortably encamped and preparing the evening meal, almost on the spot where I first heard the firing. They evidently thought me well able to take care of myself. If I had only been in time to join hands with Lieutenants Aspinall and Morse, we three subalterns would have had a little tale of our own to tell, a little *escarmouche* all our own. Had Sir Charles Napier been alive in 1886-1889, the reputation which his regiment, the 1st Baluchis (raised in 1843), won in Burma would have gladdened his fiery old heart. They had not been three months (they stayed in all three years) in the country, when they were known throughout the length and breadth of it as the "Belu-gyis," the Burmese name for a fiend of supernatural power. They had some success in love as well as in war, and brought back with them at least a dozen Burmese, Karen, or Shan wives. Like most of my fellow-countrymen, I very much liked the Burman. I had to do many a long march with him as guide, covering distances that tested the stoutest of thews and sinews, and the best of conditions. His muscle, wind, and stamina

never failed him. He had to walk in front when we approached rebel breastwork, stockade, or camp. His phlegm was undisturbed. The merciless spike pierced his foot or leg; he pulled it out and plodded on. Endurance and courage and cheery spirits are theirs, and they have the making of men in them. I generally got on well with the Burmese officials. After the active operations of the cold weather of 1886-87, I was sent to command a strong outpost in the direction of the Yomas, the centre of the densely-wooded, indentated country between the Sittang and the Irrawaddy Valleys. The officer whom I relieved said: "There is not a gang of dacoits (the common term for the rebels) within twenty miles of this post." I found that that officer had quarrelled with and never spoke to the Myook. Naturally he got no information. The Myook and I got on so well that he used to send me considerable gifts of buffalo flesh. Meat was scarce, and I little suspected that disease and not the butcher's axe or knife had terminated the animal's life. He also gave me—what was better—useful intelligence. Within fifteen days of taking command of the outpost, I had tracked to their lair several gangs of dacoits and broken them up. My general plan was a night march and an attack at dawn. It was fascinating work; but, after a time, the sound of the *taktoo* (a big lizard), the jungle cock, and the barking deer—the three commonest night-sounds in Burmese jungles—began to pall. Still, I look back to the eighteen months which I spent in Burma as one of the most attractive and engrossing periods of my life.

There is one thing that the military man will detect in all, or almost all, civilian narratives of military operations in countries bordering on India, and that is the arrogation by the civil and political officer of control over the troops. I will not attempt to trace the origin of this claim. It was in full force during the first three and a half years of the first Afghan War and, as the Great Duke pointed out to Lord Ellenborough, led, in a great measure, to the disasters of that war. It had, too, in more recent

times, its bearing on the ill-fated issue of the Battle of Maiwand. It was reflected, too, in the control exercised formerly by the Military Member over the Commander-in-Chief. On p. 15 of Sir Charles Crosthwaite's book we read: "Thus besides the soldiers the Chief Commissioner had about 3,300 men at his disposal." This was in the autumn of 1886, Sir Charles Bernard being Chief Commissioner. It is a mistake to speak of Burma as being in any sense under civilian control until the spring of 1887, by which time Lockhart and Low and the other Brigadiers under Sir George White—not to forget *the Subalterns*—had reduced the recalcitrant Burmese to a state of comparative impotency. I still preserve a letter from our excellent Deputy-Commissioner of Pynimana, Mr. H. L. Eales, written in July, 1887, to express his satisfaction at the success of our efforts from April to July of that year in breaking up the rebel gangs in the Pegu Yoma, south of the Popa Mountain; but, in reality, the country was throughout that time under martial law. Writing in February, 1887 (*Blackwood*, as before quoted), I made this as clear as words could enable me to make it. "Within a very short time after the occupation of Mandalay in November, 1885, the basis of a civil government was established, and martial law abolished. This step having received the sanction of the Government of India, a retrograde movement became difficult, if not impossible. Nevertheless, it was the opinion of a numerous section of the Indian community, and one well qualified to judge, that the step was premature. Sir Charles Bernard resolutely set his face against any retrogression. That was but natural, the forward step having been taken at his instance, and he being the chief representative of the civil power. On the other hand, if rumour be true, the supreme military authority in Upper Burma advocated the restoration of martial law. This was also only natural. As a matter of fact, however, the exercise of the civil power has been purely nominal. To all intents and purposes, martial law

has prevailed up to the present time." In 1886, in short, the phantom of power appeased the civil, while the substance contented the military. General Sir Harry Prendergast vacated the chief command early in April, 1886, and was succeeded by Major-General G. White, V.C.

I may, not improbably, have occasion, as a man of military sympathies, to draw attention to several passages in "*The Pacification of Burma*," in which the civilian author appears to me to subordinate unduly military to civilian authority. But with one passage in his book (p. 195) I am fully in accord. It is this: "There was little chance for a combatant soldier to gain distinction against such a foe. Captain Crimmin, of the Indian Medical Service, was awarded a Victoria Cross for gallantry in this action." It is, indeed, a curious coincidence that a combatant officer like Lieutenant M. J. Tighe, of the 1st Baluchis, now, I believe, a Brigadier-General, whose reputation as a good fighter was established then, and has been confirmed on several occasions since, could on this occasion, during several hours of hard fighting and pursuit, find no such occasion as was accorded to the medical officer, who was merely caring for the wounded. Personally, I have long thought that the V.C. should not be awarded for the mere saving of a life or two. I would have it awarded only to men whose bravery or devotion had materially contributed to the success of some military operation, or to the retrieval of a situation which threatened disaster. We all know that great courage and devotion are shown, and notably by medical officers, in rescuing the wounded; but I am opposed to awarding the V.C. for such courage and devotion, unless it distinctly contributes to the success of the day or hour.

Sir Charles Crosthwaite's opening chapter contains some remarks on the comparative utility for war purposes in the intricate Burmese jungles and hills of cavalry, mounted infantry, and infantry. I held command of a company of mounted infantry throughout the cold weather of 1886-87.

My strongest feeling when I resigned the command of it and rejoined my own corps on the termination of the active winter operations of General Lockhart's Brigade was that the union of British and native soldiers in one and the same company of mounted infantry was a very great mistake. As far as my own men, Báluchis, were concerned, I was perfectly content; but beside them I had twenty-five British soldiers and seventeen worthless Madras sepoys in my company. At the conclusion of my mounted infantry command, I wrote a very plain-spoken letter to Colonel Penn Symons about the incompatibility of British and native soldiers being yoked together—a letter to which he very kindly replied in a more or less sympathetic spirit. The strongest confirmation of the soundness of my view was the fact that during 1887 the mounted infantry in Burma was reorganized, and separate British and native companies formed. The senior officers under whose command we subalterns of mounted infantry found ourselves did not always show judiciousness in the way they employed or treated us. I did rear-guard duty twice with my mounted infantry on very long marches in the most difficult and intricate forest country. One commander simply ran away from me, and the other, during a march which lasted for twenty-three hours, never once thought of sending back an orderly to inform me of his movements, and to act as a guide. The result was that night overtook my column after it had covered about thirty-nine miles; and as even the elephants fell back foiled in the dark in the effort to negotiate a difficult and densely-wooded spur, I was forced to bivouac as we stood. The result was that the main body of the troops, including the G.O.C., passed the night just the other side of the spur without baggage.

Sir George White, as Sir Charles Crosthwaite (p. 17) points out, expected great things from the three regiments of cavalry for which he asked in 1886. As an arm against the Burmans the success of cavalry was simply due to the

ignorance and lack of training of our foe. Our own manuals have long taught us that, man to man, the foot-soldier is more than a match for the trooper, even in the open. Had the Burmans had discipline and enterprise, our cavalry would have been simply wiped out. But the Burmans often extended to infantry the same pusillanimity which made them spare cavalry, alike by day and night. My mounted infantry worked on several occasions with cavalry by night. When we came to difficult ravines we lit fires, and by their light crossed the obstacle. What a chance for our enemies! My own opinion is that cavalry in Burma was much overrated. Sir George White had asked for them, and was bound in his dispatch of March, 1887, to justify his demand. Hence that despatch contained undue, almost absurd, laudation of one or two cavalry officers. I remember at the time there was a leader in the *Times of India* reviewing these despatches, in which this most apposite question was put: "If Captain So-and-so is such a model of a cavalry leader, what terms of praise are left to apply to the Ziethens, the Murats, the Ruperts, and the Cromwells?" The bulk of the work of pacifying Burma was done by the infantry. The artillery was rarely of any use, and the cavalry, as Sir George White said, simply put the fear of God into them, and they bolted. Into the forest and over the rough ground the cavalry could not follow them. When they caught unarmed fugitive Burmans in the open, they were very often terrified villagers, and not "rebels"; and it is by no means certain that the sowar stopped to ascertain to which of the two he accorded (to use Sir George White's own words) "that short shrift of the lance," the sight of which "paralyzed them with fear." I have watched an old 7-pounder battery pounding away at a distant kyaung, said to be held by rebels, without ever putting a shell into it; and on another occasion, when an R.A. Captain commanded a mixed force, he insisted on opening fire on a rebel stockade with his guns. The only result was that the rebels retreated without losing a man, and lived to fight another day. Had he kept his guns silent,

and closed round the Burmese position with his infantry, he would have scored an appreciable success, and probably broke up the gang. Sir Charles Crosthwaite, who had no practical and personal experience whatever of the fighting of 1885-86, does not hesitate (p. 17) to quote the experience of the first and second Burmese wars, and to state that "the experience of 1885-86 proved cavalry to be the most effective arm." I do not know whether the "Bohs" had "a modern jockey-seat" or not, but I do know this that, jockey-seat or no jockey-seat, our infantry could, and did, give them "fits." I have beside me, as I write, the reports drawn up by me in the Intelligence Division at Simla in 1886, and the reports of the operations of all the brigades under Sir George White from October, 1886, to March, 1887; and I have my own eighteen months' experience from October, 1886, to April, 1888. There is evidence there that *the* pacifying factor of Upper Burma was the infantry, and not any other arm of the service. Besides, anthrax, glanders, and berri-berri were busy with the cavalry horses, and in some cases reduced the effective strength of a regiment by one-third.

The immortal Jorrocks said of hunting that it embodied all the excitements of war with 10 per cent. of the danger. Be that as it may, war with the Burmese seemed to me to embody about 10 per cent. of the danger of war with a European foe. The scenes and characters of Fenimore Cooper came back to my memory as, alone in the almost trackless forests, by day and sometimes all night, we tracked these rebels to their lairs, broke up their gangs, captured their arms and kits, and retook elephants and cattle looted from the villages or the Bombay-Burma trading corporations. For all purposes of ambushade or surprise every advantage should have been on the side of the Burman; and yet between April and July, 1887, marching with thirty or forty of my Baluchis, I at least twice surprised armed bodies of rebels, halting by day, and five or six times tracked out and rushed their camps, generally soon after daybreak.

They certainly had some system of outposts and sentries, but as a rule they neglected this precaution. When on November 28, 1886, we approached the headquarters (Zaydigôn and Kinywa) of the Lay-Woon (*vide* 3rd Brigade Report, B.P.W., a very inaccurate account of what really happened, *teste ure*, who was an eyewitness) I who, as stated before, had this advanced guard, saw Burmans slinking away through the trees and dense bush. It was a very stupidly-managed attack. Although we had an old Lower-Burman civilian with us, he allowed deserted villages to be burnt, thereby giving direct notice of and delaying our advance. The two 7-pounder guns also delayed us disastrously. It was probably due to this delay that the Lay-Woon was able, as I have already related, to fall upon Lieutenant Aspinall's small column (forty Somersets and Baluchis) and handle them roughly, while little opposition was offered to the main column, or rather the advanced guard of it under my command. Next morning I again had the advanced guard and, as we approached Zaydigôn, a small band concealed in the bush gave us a straggling volley and wounded two men of the leading files. No one sighted an enemy. In or about June, 1887, intelligence reached me, being then in the Yomas between the Sittang and the Irrawaddy, that Buda Yaza was hiding in my vicinity. A day or two later a Burman came to me and reported that one of Buda Yaza's men had just entered a village two miles from my camp. I had about fifty of the 1st Baluchis with me. We decoyed out and seized that man about 8.30 p.m., and forcing him to act as guide started at once, threading our way all night in pitchy darkness over country that one could with difficulty have traversed by day. As we neared the Boh's abode, picking our way at daybreak amid the spikes which beset the approaches (the guide got one right through the foot and another through the calf), the excitement was intense. But the bird had flown, and from that time till I left Burma in April, 1888, he disappeared from ken. My interpreter found in the camp a group of bamboo huts, and brought to me an inscribed

bamboo in which Buda Yaza ridiculed my attempt to catch him and threatened the guide, forced though he was to act as such, with a terrible retribution. We took that guide back to Pyinmana, and the civil authorities took him under their protection. Sir Charles Crosthwaite mentions (p. 117) Buda Yaza as again, in May, 1889, raising the standard of rebellion, and making a stubborn stand, and even repulsing our military police near Yenangyaung. After that no mention is made of him.

After General Lockhart had completed his winter operations, I was sent to command the post at Tounngyo on the east side of the Yomas which stretched south from Popa; and then began my real few months of backwoods work. As a C.O. of Mounted Infantry I was at everyone's beck and call. At Tounngyo, with sixty or seventy Baluchis, twenty of the 2nd Queen's, a R.E. sergeant, and some Military Police, I had an independent charge, thirty or forty miles away from everything. Then began the real good time. The relations between the Myook and myself were all that could be desired. I mention this because for me it meant information. Every few days came in the news of some rebel gang freshly marked down. We visited them all impartially, usually marching by night and making our calls at daybreak. We brought in on one occasion two very fine Bombay-Burma Trading Corporation's elephants, for which my men got a handsome reward; and on another fifty buffaloes, freshly looted by the rebels from some village, for which, thanks to the apathy of my superiors, the men got nothing, though Tommy Atkins was fed on them (the buffaloes) for weeks. One sad thing occurred. As we were rounding up the buffaloes in a *chaung*, in order to drive them off—we had to drive them fifteen miles—a buffalo charged and gored a man in the abdomen. He was dead, poor fellow, in half an hour. We buried him hurriedly—we were very tired, having marched since daybreak in trying heat; and had still fifteen miles of cattle-driving before us—in the bed of the *chaung*, and passed on

our way. My thoughts have often reverted to that scene. It was a sad one. In my experience of this rebel-hunting work the rebels were exceedingly clever in saving their own skins. Experience, too, adds that the official accounts of the enemy's killed and wounded were ludicrously exaggerated. These accounts may go down to history as gospel; so hereby I lodge my protest against them. Too often, moreover, the enemy's reported casualties were mere villagers, and not "dacoits" at all; and this very fact that our troops could not at times distinguish between the "dacoit" and the villager may make those who thought nothing of big "casualty" bills in 1887 thankful now to salve their consciences with the knowledge that the "bills" were very far from being strictly audited.

More than twenty-five years have elapsed since my nine months of a backwoodsman's life in the Burmese jungles came to a close, but even to this day some faint shadow of the weird spell engendered by days and nights spent in threading the intricacies of that vast area of forest, ridge and ravine, rests upon me. Pitch dark were the nights under the canopy of the trees—so dark that, marching as we necessarily did, in single file along the slightest and narrowest of tracks, we could not see the man who was moving two feet ahead of us. The guide on these occasions was always secured by a rope and kept well in hand. To keep the closest touch was imperative, and, after passing any difficult point, it was essential to halt and count the men, for fear any should have strayed. To keep a unit together and to keep touch with other units on a pitch-dark night was one of the problems which campaigning in Burma set us to solve. Only by incessant vigilance could I keep my own command together during a night march. I lost a havildar and bugler on one occasion. They cost me much anxiety and a sleepless night. We had had ocular evidence of the treatment accorded to prisoners by the rebels and, with that knowledge, to rest till my men were safe was impossible. I find among my letters one dated January 21, 1887, from Yamethen. As a descrip-

tion of a night march in Burma I think it is worth quoting.

"I got back yesterday after another ten days with the General (Lockhart) after rebels—uncommonly hard work. I think I had on that occasion the stiffest march I ever had, not excepting the (Afghan) Boundary Commission marches. On 14th inst. at 10 p.m. we started to attack, and, if possible, to surprise Buda Yaza at a place known to be fully thirty miles off. As bad luck would have it, it was my turn of duty for rear-guard. The distance proved, in the end, to be about thirty-five miles through very difficult country, hilly and overgrown with dense forest and jungle, the road a mere track over spur and ravine. I marched all night and all next day till 9 p.m., and then I found myself confronted by a bit of road that was simply impassable in the pitchy darkness. Meantime the elephants, twelve in all, were some way behind, and in the dark made very slow progress. A man with a lighted candle for the last three or four miles guided the leading elephant, the others following, up to where I had halted. It was half-past three on the morning of the 16th before the rearguard got across a *chaung* (i.e., a dry river-bed, generally with steep wooded banks), on the far side of which we had bivouacked, when I found that the mules and ponies could proceed no farther in the dark. As it turned out, the General, with his lightly-equipped column, had pushed ahead just three miles further and found Buda Yaza flown, though many of his followers were lurking in the jungle. They fired on his bivouac that night. I am glad that they did not fire on mine, for my men were dead beat, and I had with me all the sick and worn-out men of the General's column who had fallen out half-way and been left for me to bring on. After four hours halt I started off my baggage animals again. It took us four hours to get the transport over a steep ascent not 300 yards long—so bad was the track. Indeed, we had to make out a new track, as the first ponies that went up the beaten one slipped and rolled down the hill with their loads. In one place three ponies rolled down a slope of about 60°

for 40 or 50 feet, and, strange to say, were not seriously injured. The loads were all smashed up. The rebels fired on us several times during the march, but only wounded one of my mounted infantrymen's ponies. All the General achieved was to break up the rebel camp (it had long been their fastness), capture a brass gun and rescue a Madrasi prisoner."

My own chance came, as I have narrated above, five months later, but Buda Yaza had no greater difficulty in evading me. Mr. Crosthwaite himself visited T'oungoo just about that time, and thus (p. 61) describes what was going on in the Eastern (Mr. Tucker's) Division :

"In April, May, and June the troops of Sir William Lockhart's command, aided to some extent by the police, were very active. The forests and all the hiding-places were thoroughly explored and, for the time at least, cleared of dacoits. . . . By the middle of June only small bands were left, who were forced to conceal themselves, and there was little trouble afterwards in this district. But the difficult country of the Pegu Yoma between Pyinmaná (Ningyan) and the Magwé district of the Southern Division continued to harbour dacoits until 1890." Between March and June, 1887, I broke up eleven bands of rebels, and on several occasions followed them into and right across the Pegu Yoma, coming on one occasion into touch with our troops operating from Taungdwingyi. This life engendered in us those habits of alertness and keen observation with which in our boyish days the pages of Fenimore Cooper had made us theoretically familiar. As we threaded the jungle, to surprise or to be surprised was a possibility at any moment. By night, in any difficult ground, brushwood had to be collected and fires lit, especially if the party was in whole or in part mounted. A bold enemy would have known how to profit by such opportunities ; but the Burmans threw them away. I heard a captured Boh admit that he and his gang, secure in the overhanging jungle, had watched my party pass along a *chaung*, and debated whether or not they should fire. They decided not to fire. When the rains began, the dry river-beds

became quicksands. We spent some anxious hours on elephants when our road lay along a treacherous *chaung*; and the horseman would need beware. Horse and rider floundering in a fluid pulp afforded a spectacle more amusing to others than to the rider. The skill of an elephant in clambering up and down steep, moss-grown, slippery, rocky ground, often devoid of path, in the wildest recesses of the Yomas, was a revelation.

Of the five or six Brigadiers who, in 1886-87, conducted the operation of pacifying Upper Burma, I think that I am right in saying that to Generals Lockhart and Low fell the most arduous work. I have already quoted Sir Charles Crosthwaite's tribute to the activity of Lockhart's* force, and indirectly (pp. 64 and 102) he bears witness to the difficulties with which Low† had to contend. He there quotes and requotes Low's opinion that the Taungdwingyi district, divided by the intricate, trackless Pegu Yoma from that of Pyinmaná, would be the last stronghold and refuge of dacoity and organized resistance. This proved to be the case, but the operations of Lockhart's and Low's troops had, by July, 1887, left few bands capable of doing any real mischief. They had been led such a life that they longed for peace; so much so, that some gangs put their leaders, if they refused to surrender, to death, and themselves made terms with the British authorities. Major Sir Bartle Frere of the Rifle Brigade was very active and successful in his operations in Taungdwingyi in 1887, as Sir Charles Crosthwaite mentions.

In *Blackwood* for September last appears a pathetic story from the pen of Sir Charles Crosthwaite of the superstitious, but none the less unselfish, devotion of a Burmese mother. Her name, "Ma Mé," furnishes the title. The scene is the famous and familiar Shwé Dagon Pagoda. Hla-U, the son of Ma Mé, and a notorious brigand, has at last been caught, and is doomed to death. He hailed from a province in which, as the author says, no good-looking

* Afterwards General Sir William Lockhart, Commander-in-Chief in India.

† Afterwards General Sir Robert Cunliffe Low, Bombay Command.

girl would look at a young fellow who had not served his time with some brigand chief. Hla-U's mother, despairing of earthly help, appeals to the supernatural. As she toils up the fatiguing steps of the pagoda, she sees an encouraging light playing round the *hti*. As she prays, she watches a powerful man struggling to stir a sacred stone, success in moving which indicates the great god's assent to prayer. When the man had gone—he did at last stir the stone—the feeble old woman crawls up to it, and strives and strives, devoutly praying that divine aid might give her the strength to stir that stone, and so assure her that her prayers for the preservation of her son's life would not be in vain. So striving and so praying she passed unwittingly into unconsciousness and another world. Death released her from sorrow. In 1886-87 there was a famous rebel leader named Hla-U in the Sagaing district. The report of the 1st Brigade of the Burmese Field Force, dated February 1, 1887, says: "This district was in a state of absolute turmoil and terror of Hla-U in November last (1886). Hla-U has, unfortunately, not been caught, but his gangs have been completely dispersed. Hundreds of his followers surrendered, and have been set free, after trial, on bail, and the villagers have returned to their villages, and cultivation is in progress." Sir Charles Crosthwaite, on p. 49 of his "Pacification," states that, before April 10, 1887, "Hla-U, the most noted leader in the Sagaing district, had been killed by his own men weary of the life." I had thought that Sir Charles Crosthwaite's pathetic tale might have been based on the fate of the Hla-U whose name was so well known in 1886 and 1887; but such evidently is not the case. Neither Sir George Scott, nor any other writer on Burma to whose works I have access, makes any reference to the mystic stone. It seems prosaic thus to probe the pros and cons of a touching story, but I must confess that I thought that it was not improbably based on fact. If it is, however, the object—probably unworthy object—of Ma Mé's devotion was not the noted Boh, Hla-U of Sagaing.

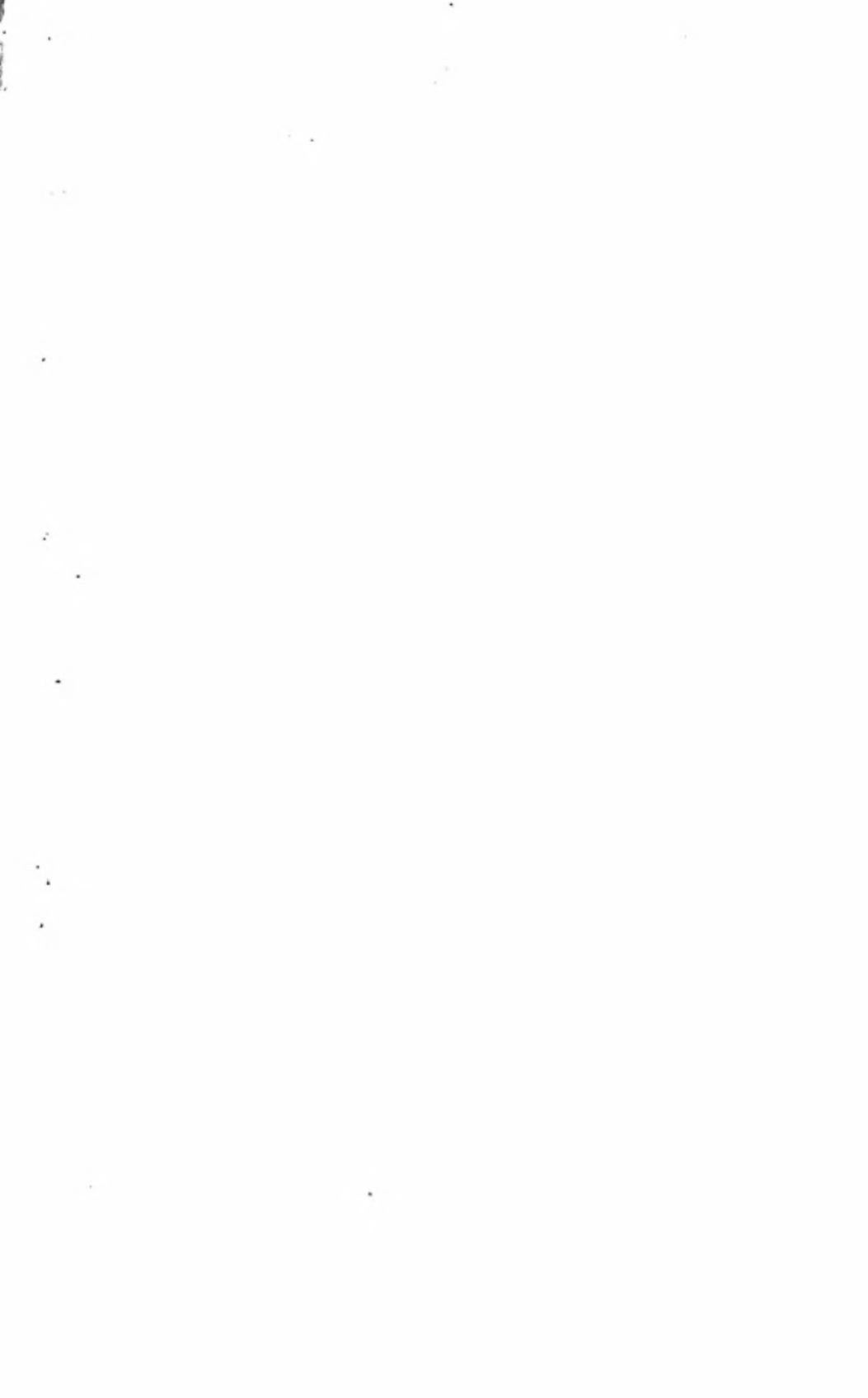
The announcement has appeared that the life of Field-Marshal Sir George White is about to be written by Sir Mortimer Durand. This biography will give us, we must hope, the history of the Burmese War from the soldier's point of view. So far, be it Scott, Crosthwaite, Thirkell White, or Dautremer, the narrative is that of a civilian. The work of M. Dautremer is, doubtless, like those of M. Joseph Chailly, intended for the instruction of French colonial administrators, colonists, and men of business. It is a very useful statistical book; but, for my part, I must say that, were it not for Sir J. G. Scott's introduction and the two opening chapters, which are historical, I should be fain to leave the volume to the matter-of-fact persons for whom it seems to be intended. The very illustrations are irritating, being mere generalizations. "A Pagoda," "Cigar Girls," "A Shan Sawbwa," "The Entrance to a Shrine," are little more than abstractions. Our first instinct is to ask: "Where?" "Who?" "What name?" "What shrine?" The frank admission on pp. 71-72 that French intrigue at Mandalay prompted the British annexation of Burma is interesting as coming from a Frenchman, though it is no news. He praises the patriotism of the French Consular agent, but argues, while Britain held the coast-line, the hinterland in the hands of France would have had no prospect of development or prosperity. "Our French agent did no more than hasten the annexation of what was left of the kingdom of Burma" are his concluding words.

As Intelligence Officer in 1887-88 with the Northern Shan column, I watched with interest years ago the progress of the projected railway from Mandalay to the Kunlon Ferry on the Salween. It proved a failure, and never went beyond Lashis. "The vast sums expended on the Mandalay-Lashis Railway . . . have not been repaid," is Sir Charles Crosthwaite's verdict. The coal of the Shan plateau is, M. Dautremer tells us, of no account, but the petroleum of Burma is a valuable asset. As our new battleships are to be propelled by petrol, this

is well. The locomotives of Burma and the Shan states will also presumably be adapted to burn oil-fuel. The Indo-Chinese railways of the future must, as far as we can judge, enter Yunnan either through the Mishmi country beyond Sadiya, or through Kunlon and Tsumao. It is this latter route which Sir J. G. Scott (Introduction, p. 29) advocates, animadverting at the same time in scathing language on the "hebetudinous want of enterprise" of the Government of India, under which, he adds, Burma "should never have been" placed. There is a vast gulf in point of temperament between the natives of India and the Burmese, as Sir Herbert Thirkell White points out in his volume, which is the work of an expert of long experience. We all, in 1885-88, liked the Burmese people, and found them "singularly human, cheerful, and sympathetic." We therefore learn with regret that they are being elbowed out by the same natives of India who are giving such trouble in South Africa, and are even threatening British Columbia. I remember well that in 1888 sepoy regiments were invited and encouraged to accept plots of land and to settle as agriculturists in the new province of Burma. Sir H. T. White says that the land is passing into the hands of alien non-agriculturists, and predicts the consequent deterioration of the Burmese race. We may also bear in mind that the Chinaman has come in in large numbers to oust the Burman from his own hereditary sphere and rights.

Posted to Lower Burma in 1878, Thirkell White had already been there seven years when Sir Harry Prendergast led a small army to the occupation of Mandalay. White followed in the company of Sir Charles Bernard, when early in 1886 Civil Government was proclaimed. When the Life of Sir George White appears, we shall have from his biographer an account of "The Pacification of Burma," which it will then be interesting to compare with the autobiographical narratives of Sir Charles Crosthwaite and Sir J. T. White.





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